NO
PAPER
RIGHTS

REIMPRESSION
INTERDITE

SEE FOLLOWING NOTE

VOIR NOTE CI-APRÈS

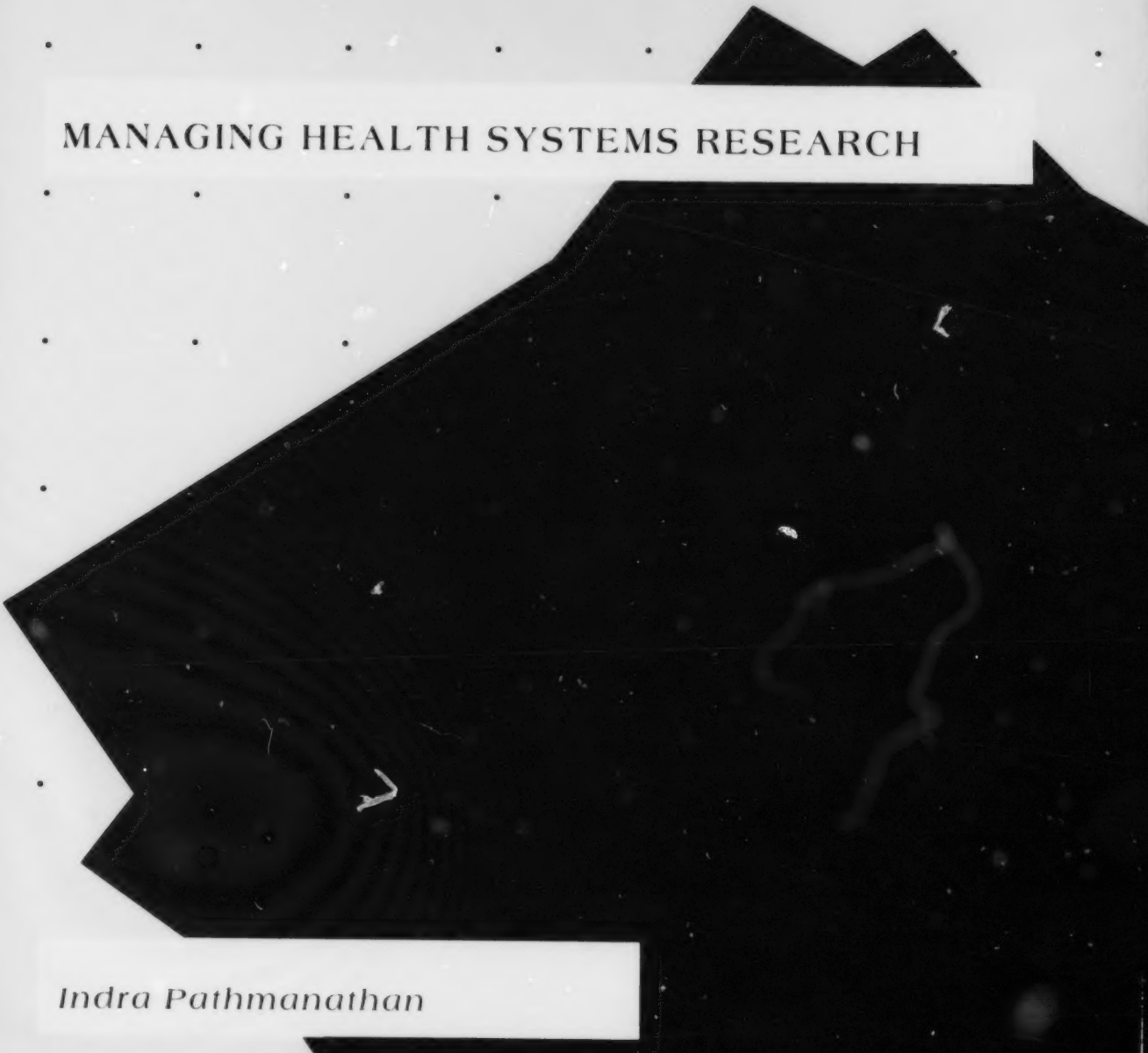
PARTS OF THE ORIGINAL DOCUMENT ARE OF POOR REPRODUCTIVE QUALITY.

MICROMEDIA LIMITED HAS ATTEMPTED TO PRODUCE THE BEST POSSIBLE COPY.

CERTAINES PARTIES DU DOCUMENT ORIGINAL SONT DE PIÈTRE QUALITÈ DE REPRODUCTION.

MICROMEDIA LTEE A ESSAYEE DE PROCURER LE MEILLEUR EXEMPLAIRE POSSIBLE.

MANAGING HEALTH SYSTEMS RESEARCH



Indra Pathmanathan

Health Systems Research Training Series

Volume 4

IDRC
CANADA

The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to support technical and policy research designed to adapt science and technology to the needs of developing countries. The Centre's five program sectors are Natural Resources, Social Sciences, Health Sciences, Information Sciences and Systems, and Corporate Affairs and Initiatives. The Centre's funds are provided by the Parliament of Canada; IDRC's policies, however, are set by an international Board of Governors. The Centre's headquarters are in Ottawa, Canada. Regional offices are located in Africa, Asia, Latin America, and the Middle East.

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programs.

Other volumes in the HSR Training Series

Volume 1: Promoting health systems research as a management tool (IDRC-286e)
Ann Brownlee

Volume 2: Designing and conducting health systems research projects

Part I - Proposal development and fieldwork (IDRC-287e.1)
Part II - Data analysis and report writing (IDRC-287e.2)
Corlien M. Varkevisser, Indra Pathmanathan, and Ann Brownlee

Volume 3: Strategies for involving universities and research institutes in health systems research (IDRC-288e)
Ann Brownlee, Lilia Duran Gonzales, and Indra Pathmanathan

Volume 5: Training of trainers for health systems research (IDRC-290e)
Indra Pathmanathan and N.I. Nik-Safiah

For more information about these publications, please write to: IDRC, Marketing and Distribution Unit, Corporate Affairs and Initiatives Division, P.O. Box 8500, Ottawa, Ontario, Canada K1G 3H9.

Il existe également une version française de cette publication.
La edición española de esta publicación también se encuentra disponible.

HSR Training Series

Volume 4: Managing Health Systems Research

The Technical Working Group

Ann Brownlee (United States)
Lilia Duran Gonzales (Mexico)
German Gonzales (Colombia)
Yvo Nuyens (Belgium)
Indra Pathmanathan (Malaysia)
Annette Stark (Canada)
Patrick Twumasi (Ghana)
Corlien M. Varkevisser (The Netherlands)

IDRC-289e

Managing Health Systems Research

Health Systems Research Training Series
Volume 4

Indra Pathmanathan

Jointly published by the Health Sciences Division of the International Development Research Centre, Ottawa, Canada, the Programme on Health Systems Research and Development of the World Health Organization, Geneva, Switzerland. This series was translated into Spanish by the Health Services Development Program of the Pan American Health Organization.

© International Development Research Centre 1992
PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

Pathmanathan, I.

IDRC, Ottawa, Ont. CA
WHO, Genève, CH

IDRC-289e

Managing health systems research. Ottawa, Ont., IDRC, 1992. xxii + 179 p. : ill. (Health systems research training series ; v. 4)

/Management development/, /modular training/, /health surveys/ — /capacity building/, /human resources development/, /institutional framework/.

UDC: 613.001.5

ISBN: 0-88936-588-1

A microfiche edition is available.

The views expressed in this publication are those of the author and do not necessarily represent those of the International Development Research Centre or the World Health Organization. Mention of a proprietary name does not constitute endorsement of the product and is given only for information.

92-05428/

Abstract

This is the fourth volume of the five-volume Health Systems Research (HSR) Training Series which has been compiled by a Technical Working Group, supported by IDRC and WHO. Each volume is directed toward a particular target group and each addresses specific aspects of the HSR process. Volume 4 is concerned with training for managers of research institutes, academic departments, and agencies that have a function in processing research applications and in funding and coordinating research projects. The emphasis is on support of the development of HSR in the country as well as the utilization of research results.

The other volumes in the series are: volume 1, which focuses on the need to promote the use of HSR as management tool and reviews strategies for promoting HSR among policymakers and senior managers; volume 2, a course outline in modular format, which deals step-by-step with the development of an HSR proposal and field testing (Part I) and with data analysis, report writing, and implementation (Part II); volume 3, a review of strategies that can help universities or research institutes initiate and implement multidisciplinary HSR programs; volume 5, a course outline in modular format designed to assist those whose primary responsibility is organizing and conducting training courses for the relevant target groups.

The series is designed to support a program of essential national health research. Users are encouraged to examine the materials critically and to choose and adapt them to their particular needs.

Résumé

Ce volume est le quatrième d'une collection de cinq volumes de formation à la recherche sur les systèmes de santé (RSS) qui ont été rassemblés par un groupe de travail technique financé par le Centre de recherches pour le développement international et l'Organisation mondiale de la santé. Chaque volume est destiné à un groupe particulier et chacun porte sur certains aspects de la recherche sur les systèmes de santé. Le volume 4 porte sur la formation des cadres d'instituts de recherche, de départements universitaires et d'organisations qui oeuvrent dans l'application des résultats de la recherche et dans le financement et la coordination de projets de recherche. L'accent est mis sur l'appui de la mise sur pied de la recherche sur les systèmes de santé dans un pays, de même que sur l'utilisation des résultats de la recherche.

Les autres volumes de la collection sont les suivants : le volume 1 traite de la nécessité de promouvoir la RSS comme outil de gestion. Y sont décrites les stratégies propres à cette promotion auprès des décideurs et des cadres supérieurs. Le volume 2, sous forme modulaire, est le volume central qui expose, étape par étape, la manière de formuler une proposition de RSS et de la mettre à l'essai (partie I), et aussi d'analyser les données et de rédiger un rapport (partie II). Le volume 3 vise à aider les chercheurs de formation universitaire qui travaillent dans des universités ou des instituts de recherche et qui veulent promouvoir des programmes multidisciplinaires de RSS et y participer. Le volume 5 aidera les personnes chargées d'organiser et de donner des cours de formation aux divers groupes cibles.

Ces cinq volumes ont pour but d'appuyer un programme national de recherche essentielle en santé. Les personnes qui s'en serviront sont incitées à les examiner d'un oeil critique et à en tirer ce qui répond à leurs besoins ou y répondrait après adaptation.

Resumen

Este es el cuarto de cinco volúmenes de una serie de capacitación sobre Investigación de Sistemas de Salud (ISS), compilada por un Grupo de Trabajo Técnico que recibió el apoyo del Centro Internacional de Investigaciones para el Desarrollo y la Organización Mundial de la Salud. Cada volumen está dirigido hacia un grupo particular y trata de aspectos específicos del proceso de ISS. El Volumen 4 trata de la capacitación de administradores de institutos investigativos, departamentos académicos y organismos que intervienen en el procesamiento de aplicaciones investigativas y en el financiamiento y coordinación de proyectos investigativos. El énfasis se hace en el apoyo del desarrollo de ISS en el país, así como en la utilización de resultados investigativos.

Los otros volúmenes en la serie son: volumen 1, que centra su atención en la necesidad de promover los usos de ISS como instrumento de gestión. Asimismo, describe las estrategias para promover la ISS entre ejecutivos y gerentes principales; volumen 2, en formato modular, elemento fundamental que trata progresivamente del desarrollo de una propuesta de ISS y la prueba sobre el terreno (Parte I). Asimismo, se trata en este volumen el análisis de datos y la redacción de informes (Parte II); volumen 3, concebido para ayudar a los investigadores con educación universitaria que trabajan en universidades o institutos investigativos que deseen promover y participar en programas multidisciplinarios de ISS; volumen 5 servirá de ayuda a aquellos cuya responsabilidad primaria sea organizar y dictar cursos de capacitación para los grupos meta pertinentes.

La serie está diseñada para apoyar un programa esencial de investigación sobre salud a nivel nacional. Se exhorta a los usuarios a examinar críticamente los materiales y adaptarlos a sus necesidades particulares.

ACKNOWLEDGMENTS

This volume was originally conceived by Yvo Nuyens (Programme of Health Systems Research and Development, World Health Organization) and its development was guided and coordinated by Indra Pathmanathan (Malaysia) with advice from the Technical Working Group. The modules have been developed over a period of 3 years by a group of module facilitators who have among them expertise in health systems research, management sciences, sociology, psychology, policy analysis, and health planning and management.

The modules were tested during two international workshops sponsored by the World Health Organization and funded by the Danish International Development Agency: in Kuala Lumpur, Malaysia, in 1988 and in Arusha, Tanzania, in 1990. The module facilitators were:

Module 1	Indra Pathmanathan (Malaysia)
Module 2	Indra Pathmanathan and earlier version by Abdul Khalid Sahan (Malaysia)
Module 3	Ruud Peeters and Indra Pathmanathan (Malaysia) and earlier version by Yvo Nuyens (Belgium)
Module 4	Ruud Peeters (Belgium)
Modules 5 and 6	Indra Pathmanathan (Malaysia)
Module 7	Geert van Etten (Netherlands)
Module 8	Eyitayo Lambo (Nigeria) and earlier version by Jan Branckaerst (Belgium)
Module 9	Lilia Duran Gonzales (Mexico) and W. Hassouna (Egypt)

Participants at these workshops were senior managers from research institutions, universities, and ministries of health in 26 countries, including Bangladesh, Botswana, China, Costa Rica, Czechoslovakia, Ethiopia, Ghana, Hungary, Islamic Republic of Iran, Kenya, Republic of Korea, Kuwait, Malawi, Malaysia, Mexico, Morocco, Mozambique, Myanmar, Pakistan, the Philippines, Sri Lanka, Sudan, Tanzania, Turkey, Uruguay, and Yugoslavia. The comments and feedback from these participants were very valuable in developing and revising the modules.

The second workshop was also attended by representatives from the World Health Organization, namely, E. Tarimo (Headquarters), K. Jayasena (Southeast Asia), El Sheik Mahgoub (the Eastern Mediterranean), L.R. Aleta (Africa), and A.L. Ruggerio (the Pan American Health Organization). These representatives served as evaluators throughout the workshop and provided continuous feedback, which formed the basis for the final revision of the modules. Throughout this process, it was the enthusiasm and support of Yvo Nuyens and unwavering commitment of Annette Stark (IDRC) that made this volume possible. Finally, as with all the volumes in this series, Ann Brownlee (USA) provided the editorial input.

CONTENTS

Foreword ix

General Introduction xiii

Introduction to This Volume xv

Module 1: Orientation to the workshop 1

Module 2: Purpose and uses of HSR 11

Module 3: The research process for HSR 27

Module 4: Techniques and methods to facilitate the research process in HSR 59

Module 5: Phases in developing HSR as a management tool 79

Module 6: Human resource development strategies 105

Module 7: Organizational strategies 121

Module 8: Institutional strategies 143

Module 9: Negotiation skills for HSR 161

FOREWORD

The ultimate goal of any national health-development process is to enable its people to reach a level of health that at least enables them to participate actively in the social and economic life of the community in which they live. To attain this objective, existing health systems must be redirected to achieve equitable reallocation of resources for health — total coverage, increased accessibility to primary health-care services, and effective referral to secondary and tertiary levels of care. It is also relevant to develop appropriate mechanisms to promote effective community participation in the promotion and maintenance of health.

Such redirection of health systems may require changes in health-care planning and government policy; in the organization and administration of health and related services; in the financing and budgeting of systems and procedures; and in the selection and application of appropriate technology.

To effect the necessary changes, countries must decide on the best approaches to adopt. This requires detailed and accurate information on needs, possibilities, and consequences of recommended actions. Such information is often lacking, inadequate, or unreliable. As a result, decisions are based on assumptions and unjustified conclusions and often result in inappropriate policy choices, the consequences of which are only discovered after implementation.

Research is a systematic search for information and new knowledge. It serves two essential and powerful purposes in accelerating advances in health. First, basic or traditional research is necessary to generate new knowledge and technologies to deal with major unresolved health problems. Second, applied research is necessary to the process of identifying priority problems and to designing and evaluating policies and programs that will be of the greatest health benefit, using existing knowledge and available resources, both financial and human.

These two purposes together, in what has now been defined as essential national health research, must catalyze the generation of new knowledge and the application of existing knowledge, an essential link to equity in development.

During the past decade, concepts and research approaches to support health development have evolved rapidly. Many of these have been described by specific terms such as operations research, health services research, health manpower research, policy and economic analysis, applied research, and decision-linked research. Each of these has made crucial contributions to the development of Health Systems Research (HSR) but their limited and highly focused approaches to problem solving have resulted in their being integrated within the scope of HSR while at the same time describing their unique contribution to health in development.

HSR is ultimately concerned with improving the health of a community, however defined, by enhancing the efficiency and effectiveness of the health system as an integral part of the overall process of socioeconomic development.

The aim of HSR is to provide health managers at all levels with the relevant information that they need to solve the problems they are facing. The participatory nature of such research is one of its major characteristics. It is argued that the involvement of all parties — the community, health-care managers and decision-makers, and researchers — in the definition of the problem helps to focus the investigation and to enrich the quality of the data collected. Similarly, participating in all stages of the research is essential if feasible and acceptable solutions to problems are to be implemented and sustained at community, district, regional, or national level.

Because HSR addresses health problems in the broad context of social, economic, and community development, research inputs from many different disciplines are required. These include demography, epidemiology, health economics, policy and management sciences, social and behavioral sciences, statistics, and some aspects of the clinical sciences. Each of these disciplines has developed specialized research approaches in its efforts to provide information that will support health development, but it is increasingly evident that the problems that are addressed by HSR require a combined input from many disciplines and especially that researchers from these specialized fields need to acquire the skills to work together in multidisciplinary teams.

The main characteristics of HSR are

- Its focus on priority problems in health;
- Its participatory nature;
- Its action orientation;
- Its integrated, multidisciplinary approach;
- Its multisectorial nature;
- Its emphasis on cost-effectiveness;
- Its focus on practical, timely solutions; and
- Its iterative nature that allows for evaluation of the impact of planned change and consequent revision of action plans and health policy.

Although its methodologies can be applied to similar problems in different countries, the findings and solutions to these problems are unlikely to be the same because of differences in cultural, social, economic, and political realities. This is one of the strong arguments in support of a national core of persons trained in HSR whose orientation and plan of work is guided by the country's agenda of essential national health research.

With progressive development, the uses of HSR are becoming more widely appreciated. As a result, it is being integrated into and applied in special areas of management such as quality assurance, technology assessment, and resource management.

Because the capacity for HSR is small, especially in developing countries, it is not surprising that, over the last few years, a series of training programs has been organized or funded by many agencies, including the International Development Research Centre (IDRC), the Pan American Health Organization (PAHO), the World Health Organization (WHO), and the US Agency for International Development (USAID).

As well, several international health programs have given high priority to capacity building for HSR.

- The UNICEF *Special Program on National Capacity Building for Child Survival and Development* aims "to strengthen awareness, knowledge, and skills for operations research using the health systems approach to promoting inquisitiveness and self-reliant approaches to identify pressing problems at the community level and find practical solutions for them."
- The overall goal of the *Network of Community Oriented Educational Institutions for Health Sciences* is "to improve the relevance of health professions education by enhancing the ability of graduates

to help identify and solve the problems of communities in which they serve ... using as framework a new system of partnerships among universities, governments and communities, the focus of which is a program of essential national health research."

- The *International Health Policy Program* is planning to develop health-policy research and training centres, whose role will be to facilitate and coordinate the "synthesis of policy-relevant research, dissemination of such research, capacity building in health policy analysis, and technical assistance for policy analysis and research."

- The *International Clinical Epidemiology Network* (INCLEN) supports the development of clinical epidemiology units (CEUs) in medical schools in developing countries. The role of CEUs is to provide leadership in the application of quantitative measurement principles (drawn from clinical epidemiology, biostatistics, health economics, and health social science) in the research, education, and service responsibilities of the medical school.

- The Danish International Development Agency (DANIDA) has been supporting a series of inter-regional training workshops for research managers in HSR and, since 1987, the *Joint Project of the World Health Organization* and *The Netherlands Ministry for Development Cooperation - The Royal Tropical Institute* is involved in a process for capacity building for HSR in 14 countries of southern Africa.

All these and many more initiatives in capacity building for applied research received, in 1990, a strong political, moral, and intellectual backing in the recommendations of the Commission on Health Research for Development. In its *Agenda for Action*, the Commission recommends

> That building and sustaining research capacity be integrated as a key objective and powerful instrument for all health and development investments. Primary commitment must come from developing-country governments to accord priority and provide sustained financial support. Strong international re-enforcement is also needed. International exchange and interaction can do a great deal to help strengthen the capacity of developing-country researchers and institutions.

Within the broader context of the Commission's recommendations, three major challenges for the future development of HSR can be identified:

- How to enhance the demand for HSR;

- How to strengthen national capacities in HSR; and

- How to institutionalize the efforts into a sustainable process.

It is with these challenges in mind that this *Health Systems Research Training Series* was developed.

Annette Stark, Associate Director
Health Systems Research
Health Sciences Division
International Development Research Centre

Yvo Nuyens, Programme Manager
Health Systems Research
and Development
World Health Organization

GENERAL INTRODUCTION

A recent review of Health Systems Research (HSR) workshops sponsored by IDRC concluded that, although IDRC's objectives had been met, training materials should be revised and expanded to meet the needs of specific groups and to guide the development of follow-up sessions. In a related action, the WHO Global Advisory Group on HSR concluded that building and sustaining national capacities for HSR was a major issue to be addressed in program activities. It was specifically recommended that these activities must include components to "evaluate and revise training materials periodically and to support training programs at different levels of the health systems."

As a result of these recommendations, representatives of IDRC, PAHO, and WHO met in Ottawa in October 1988 to review past and current initiatives and to propose future activities. The group recognized that, if training in HSR is to have an impact on improving health and health care, it is necessary to clarify the context and stages of development of an effective HSR process within a given country. It was further decided that specific target groups for orientation and training in HSR should be selected and appropriate training strategies developed to strengthen the research capacity of countries, based on their specific needs and capabilities in HSR.

To achieve this goal, a technical working group was established and given the mandate to define and coordinate the development of a basic set of training materials for each of five identified target groups. The framework consisted of:

- A definition of the target group;
- A description of the entry competence or entry characteristics of the target group;
- The expected outcome behaviour, including skills and attitudes;
- The appropriate training strategies and training context; and
- The available training materials.

The deliberations and effort of the Technical Working Group have resulted in these five volumes of materials. Users are encouraged to become familiar, generally, with the entire set and then to selectively implement a program of training, research, planning, and health-care policy based on their country's needs.

Volume 1: Promoting Health Systems Research as a Management Tool

For Decision-makers
This document focuses on the need to promote the use of HSR as a management tool among decision-makers. Based on an analysis of experience in developing countries in the last decade, it presents an overview of how HSR can lead to better decisions and how the development of an effective research program can be fostered at country level. In addition, it provides descriptions of specific strategies for promoting HSR among policymakers and senior managers that have been used successfully in a number of settings.

Volume 2: Designing and Conducting Health Systems Research Projects

Part I - Proposal Development and Fieldwork
Part II - Data Analysis and Report Writing
Course participants, who may include concerned citizens, health workers, researchers, and health decision-makers from the provincial or even national level, will select priority health problems particular to their own situations that cannot be solved unless more information is collected. Preferably, the topics will have been selected before the training starts (see Volume 1), but they may need more specification. In most cases, a team of course participants will then carry out the planned research alongside their regular duties (Part I). A second workshop is then scheduled to provide information on data analysis, report writing, and utilization of results (Part II).

This volume is the pivotal one that deals specifically with the development of research proposals of a participatory nature (community/health-care manager/researcher) and, subsequently, with the implementation of the field study and the analysis and dissemination of study results. In this context, it is also of interest to junior researchers and those persons in universities and other training facilities who wish to operationalize HSR.

Volume 3: Strategies for Involving Universities and Research Institutes in Health Systems Research

For Senior Researchers and Academic Staff
This volume is designed to assist university-trained researchers located in universities or research institutes who wish to promote and participate in multidisciplinary programs of HSR. This volume will be of particular interest to those who wish to integrate the concepts of HSR into existing health and social science degree programs and to promote the development of student theses in the area.

Volume 4: Managing Health Systems Research

For Research Managers
The research managers for whom this volume is intended include managers of research institutes, academic departments, and agencies that have a function in processing research applications and in funding and coordinating research projects. The training should enable managers to facilitate their institutions' or organizations' contribution to and support of the development of HSR in the country as well as the utilization of research in improving the health of the people.

Volume 5: Training of Trainers for Health Systems Research

For Trainers and Facilitators
Experienced researchers are not necessarily experienced teachers. Moreover, few of them have experience in the organization and training of participants for whom research is a secondary responsibility and who have limited time to read or engage in research activities.

For training in HSR to be effective, experienced researchers need to acquire competence in the training approaches that have been successfully developed and used during the past few decades for training health personnel in a variety of important topics related to health.

Trainers and facilitators include those whose primary responsibility is organizing and conducting training courses for the different target groups and those who assist trainers in conducting courses.

INTRODUCTION TO THIS VOLUME

This volume is intended for use during intensive courses or workshops for research managers, most of whom have had some previous exposure to health systems research (HSR) through, for example, consensus-building strategies, such as those described in Volume 1 of this HSR Training Series. This volume can be regarded as a contribution toward the "consolidation phase" of developing HSR.

"Research managers" include directors and heads or chairpersons of departments and units in universities and research institutes that are involved in health systems research, and in agencies that fund research. Managers in various ministries in the government who have responsibility for coordinating and developing health and health-related research may also be viewed as research mangers. Thus, research managers are a group that has a crucial function in developing and implementing policies and strategies in support of HSR. It is this group that can integrate and consolidate the gains made by training other groups (i.e., decision-makers, health workers and junior researchers, and experienced researchers and academics).

Purpose of the course

The purpose of training research managers is to enable them to:

- Advocate, promote, and support the development of HSR and its use to improve the health of the people;

- Contribute to the development and implementation of appropriate policies and strategies for:

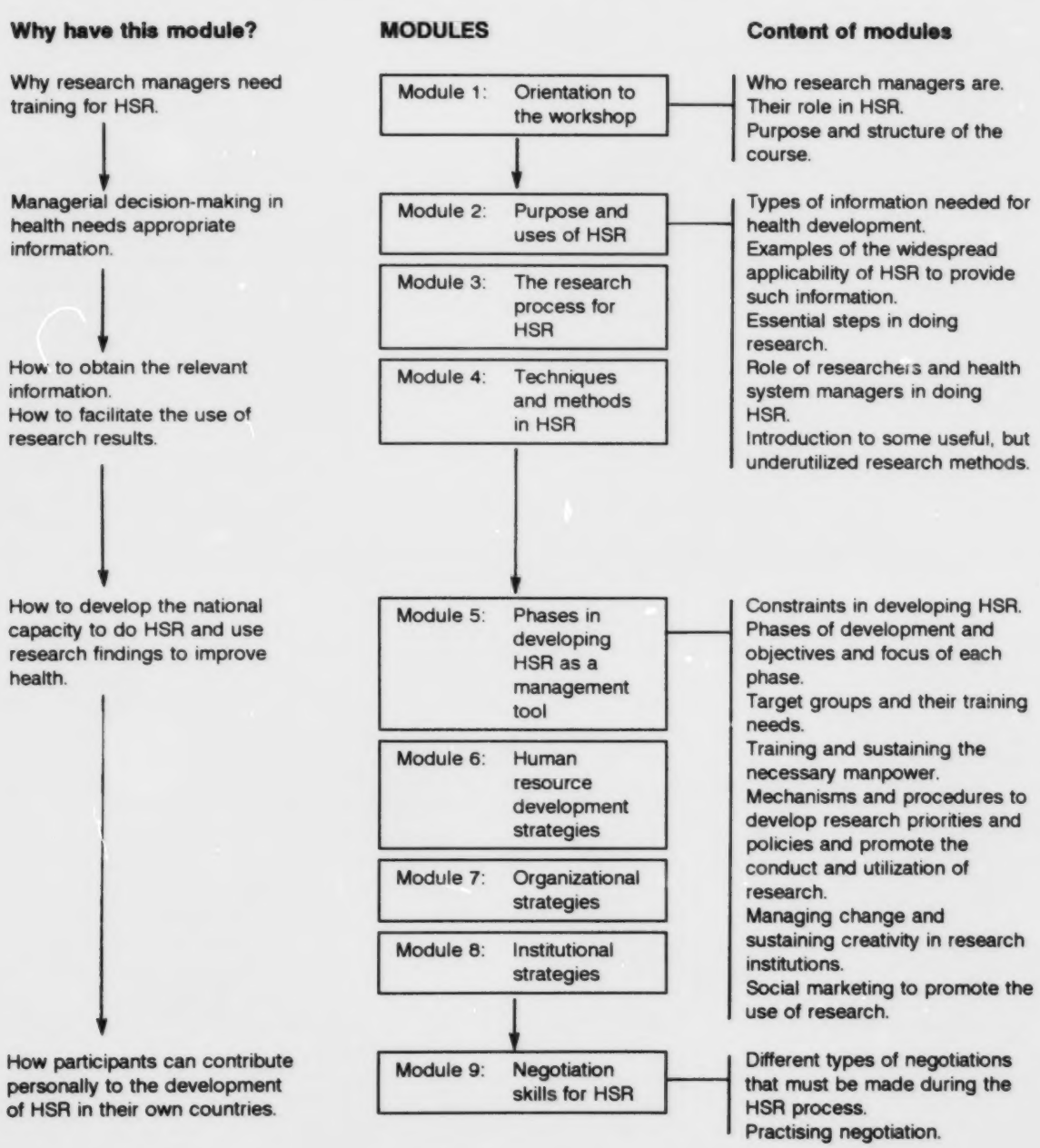
  - Developing manpower for HSR,
  - Realigning research funding to support national health priorities,
  - Establishing mechanisms to stimulate and sustain good quality research in support of health development, and
  - Promoting the use of research findings in managerial decision-making.

Content of the training materials

This volume consists of nine modules for use during courses or workshops for research managers. An overview of the rationale and content of the modules and their relationship to each other is provided in Figure 1. Each module consists of one or two lecture/discussion sessions and a number of group work exercises followed by a plenary presentation.

Subsequent to the introductory Module 1, each module can be given to participants as a reading assignment before the lecture/discussion session, which can then be used to discuss the issues covered in the module. Participants should be encouraged to contribute ideas based on their own experiences. This approach will optimize the opportunity to benefit from experiences in various countries and cultural settings. Most of the modules are followed by Trainer's Notes, which provide guidance in preparing for each session. Module 9 contains a number of role plays. Detailed instructions on how to organize the role plays are provided for the module facilitator. The effectiveness of this session can be enhanced if there are facilities for video recording and immediate playback and critique.

Figure 1: The rationale and content of the modules in this volume.


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Participants will develop individual plans of action during the workshop. The rationale for this is summarized in Figure 2. Further details are provided in Module 5 and the plans are progressively developed during Modules 5, 6, 7, and 8. It is expected that participants will implement their plans in their home countries or institutions.

Selecting material from this volume

The training modules that are provided in this volume may be combined in several ways to suit the educational needs of various types of participants and to fit into the time available for the research managers' course. The following are some examples of how selections can be made:

- Use all the modules, but adjust the sequence;
- Omit a few modules that are "familiar territory";
- Select a few modules (e.g., for a session on managing HSR that will be part of a more general course for health managers);
- Use all the modules, but omit some of the content in certain modules.

Selection of participants

To ensure that appropriate candidates are selected, the following information should be provided when invitations are sent.

The training course is intended for research managers. The term **RESEARCH MANAGER** is used in a broad sense, and may include managers in the following categories of institutions:

- Institutions that traditionally have been devoted primarily to research (e.g., biomedical and social research institutions);

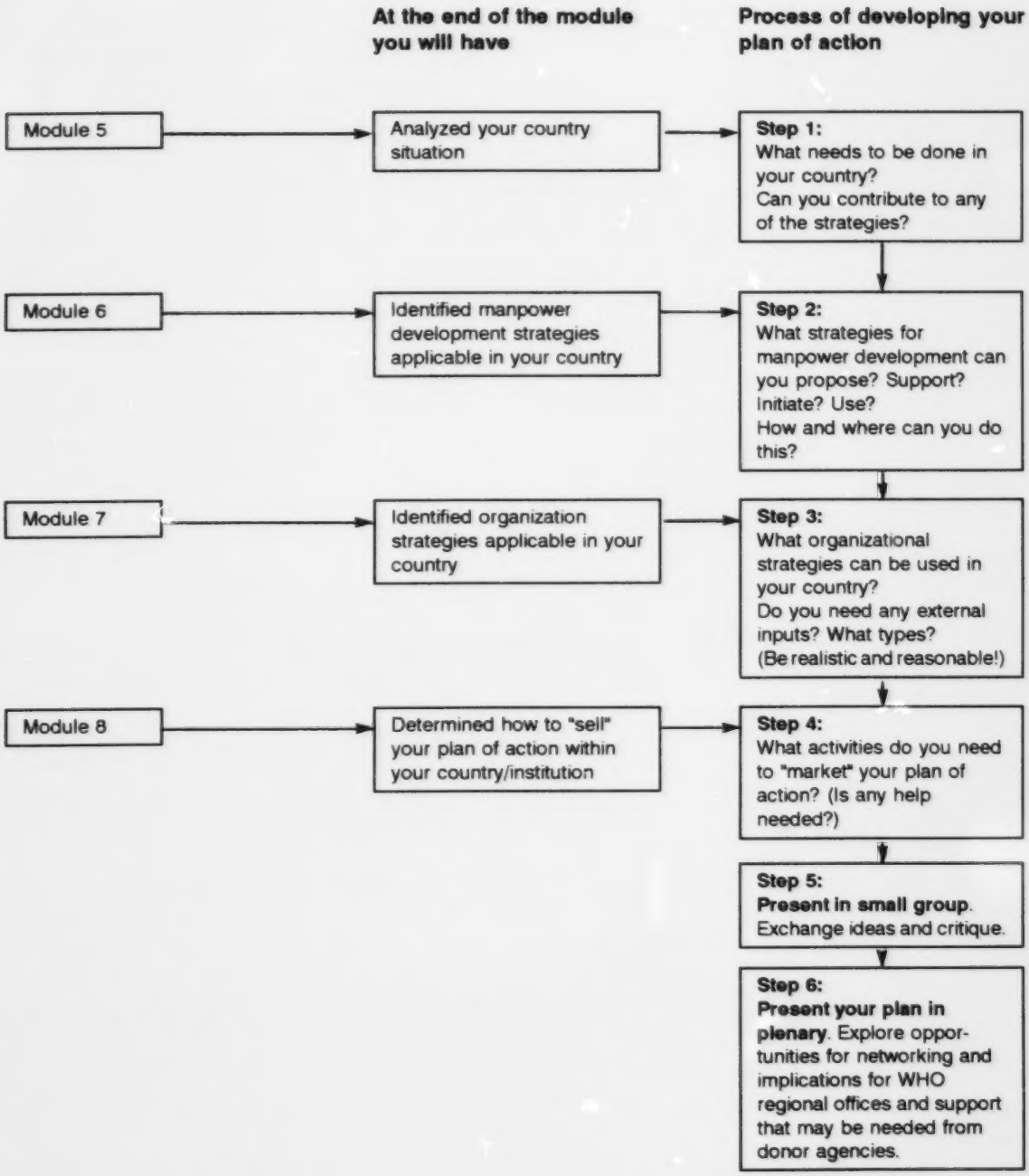
- Academic departments in universities (e.g., departments of community medicine, public health, primary care, social medicine, medical sociology);

- Institutions that primarily have had training, planning, or similar functions, usually in public health, nursing, etc., but recently have been given a role in HSR (e.g., institutes of health, planning and development units in ministries of health);

- Units, departments, or agencies that process research applications, approve funding for research, establish coordinating mechanisms, etc. Such units may be located in universities, ministries of health, science and technology, social development, etc. Managers from these institutions may also be members of research councils, national research committees, university research committees, etc.

- Donor agencies that support research and development. Such agencies may be sectoral, national, regional, or international.

Figure 2: Development of individual plans of action.


At the end of the module you will have
Process of developing your plan of action
Module 5
Analyzed your country situation
Step 1: What needs to be done in your country? Can you contribute to any of the strategies?
Module 6
Identified manpower development strategies applicable in your country
Step 2: What strategies for manpower development can you propose? Support? Initiate? Use? How and where can you do this?
Module 7
Identified organization strategies applicable in your country
Step 3: What organizational strategies can be used in your country? Do you need any external inputs? What types? (Be realistic and reasonable!)
Module 8
Determined how to "sell" your plan of action within your country/institution
Step 4: What activities do you need to "market" your plan of action? (Is any help needed?)
Step 5: Present in small group. Exchange ideas and critique.
Step 6: Present your plan in plenary. Explore opportunities for networking and implications for WHO regional offices and support that may be needed from donor agencies.

Duration of the course

A research manager is likely to be at a relatively high level in his or her administrative hierarchy and, therefore, would be willing or able to attend courses of only very short duration (6–10 days).

The nature of the course

Intercountry or regional

Managers who are fairly high in the management hierarchy in their own countries are more likely to attend and give serious attention to courses organized on an intercountry or regional basis than those organized within one country. Furthermore, in many countries there is overt or covert rivalry between institutions within the country. When managers from such "rival" institutions attend an intercountry or regional course, interaction with peers from similar institutions in other countries is likely to promote positive communication and blunt old rivalries.

Organized but flexible

The workshop structure should be **organized but flexible**. Participants are experienced managers. Their active participation should be the main characteristic of the workshop. The workshop should be flexible enough that the sequence of the modules, the relative emphasis on different modules, and the relative emphasis on the different components of each module can be adjusted, if necessary. For example, for participants who have a strong background in research, less emphasis can be given to Modules 2, 3, and 4. Module 9 can be inserted anywhere after Module 5, if it becomes necessary to give participants a break from modules that are heavy with concepts and theory.

Logistic arrangements

Because participants will be relatively senior, due consideration should be given to logistic arrangements both for the workshop sessions and for lodging.

Much of the learning process will occur during informal interaction among participants and it is desirable to arrange for participants and facilitators to live on the same premises and have all their meals together.

Information for participants

Participants should receive information on the workshop and the pre-workshop reading assignments **at least 4 weeks** before the workshop. This information should include:

- Objectives of the workshop (see Module 1),
- Rationale and structure of the workshop (see Module 1),
- The pre-workshop readings listed in Annex 1 and in Modules 1 and 2, and
- The pre-workshop assignments, also listed in Annex 1 and in Modules 1 and 2.

The reading materials that are indicated in each module should be made available either at the beginning of the workshop or in conjunction with the appropriate module. Readings are listed for

Modules 3, 4, 5, 7, and 9. Certain handouts should be read before the sessions as well. A comprehensive list of these reading materials and handouts is listed in Annex 2, at the end of this introduction.

Conducting the workshop

The modules in this volume should be presented by module facilitators who have some background and experience in the subject matter of the respective module, i.e.,

Modules 1–4	Research, especially health systems research
Modules 5–8	Management, especially health and research management
Module 9	Research, behavioural sciences, and preferably educational methods, especially using role playing as a teaching/learning method

Each module has provision for discussion in small groups. It is necessary to assign one facilitator to each group. The group work facilitators do not need to have special expertise in the subject matter of the module. Guidelines for conducting the group work are provided in each module. The module facilitator should discuss the group work with the group work facilitator before each session.

The role of facilitators

Module as well as group work facilitators should familiarize themselves with the reading materials and the modules before the workshop.

Facilitators should attend all the sessions for each module.

All facilitators should feel free to intervene or contribute to the discussions following the lecture sessions and during the plenary sessions. During the small group discussions, each facilitator will be responsible for facilitating his or her group.

During the workshop, provision should be made for daily review sessions during which facilitators are asked to provide feedback on the group work. Any necessary adjustments in the workshop schedule should be discussed during these sessions.

Annex 1: Pre-workshop preparation for participants

The workshop will provide many opportunities for you to share experiences and opinions. You will **not** be expected to make country reports. However, during the workshop you will be expected to analyze your own country's situations with respect to HSR and the use of research in managerial decision-making for health development. Also, at the end of workshop you will be expected to develop an individual plan of action that you intend to implement.

To prepare for the workshop, you are requested to complete the pre-workshop reading and the pre-workshop assignment.

1. **Pre-workshop reading**

   - World Health Organization, 1988. *Health systems research in action: case studies from Botswana, Egypt, Indonesia, Malaysia, the Netherlands, Norway and the United States of America*. WHO, Geneva, Switzerland. pp. 1–34 and 77–100. WHO/SHS/HSR 88.1.

   - World Health Organization, 1990. *From research to decision making: case studies on the use of health systems research*. WHO, Geneva, Switzerland. pp. 10–17 and 60–65. SHS/HSR/902.

   - World Health Organization, 1983. *Research for the reorientation of national health systems: report of a WHO study group*. WHO, Geneva, Switzerland. pp. 5–58. Technical report series 694.

   - Varkevisser, C., Pathmanathan, I., Brownlee, A. 1991. *Designing and conducting health systems research projects: part I - proposal development and fieldwork* (HSR series volume 2), Module 9: Study types. IDRC, Ottawa, Canada. IDRC-287e.1.

   - Taylor, C.E. 1984. *The uses of health systems research*, Chapter 2: The choice of methods. WHO, Geneva, Switzerland. pp. 22–41. Public health papers no. 78.

2. **Pre-workshop assignment** You should familiarize yourself with the following topics in your country:

   - Identify some illustrative examples of HSR studies that have been completed in your country. (Please note that it is **not** necessary for *a* study to be labelled as "health systems research." If it has fulfilled the criteria for HSR as described in the pre-workshop reading materials, it can be considered an HSR study.)

   - Identify some examples of how information derived from HSR has contributed to decision-making for health policy, health program management, or improvement of health services.

   - Review appropriate documents and have discussions with a few key health managers to determine:

     - What are the problems of priority concern in the health system in your country?
     - Do health managers feel the need for more information on those problems?
     - Why do they need this information?

   You will not be expected to provide comprehensive answers to the above questions, but to have some opinions that can be discussed during the workshop.

Annex 2: Readings and handouts to be distributed prior to various course sessions

Module 3:

- Module 9, Study types, from Volume 2 of this HSR Training Series.
- Taylor, C.E. 1984. *The uses of health systems research*, Chapter 2: The choice of methods. WHO, Geneva, Switzerland. pp. 22–41. Public health papers no. 78.
- World Health Organization, 1988. *Health systems research in action*. WHO, Geneva, Switzerland. pp. 12–15.

Module 4:

- Modules 10A through D, Data-collection techniques, from Volume 2 of this HSR Training Series (optional).
- Handout 4.2, Introduction to data-collection techniques and approaches applicable in HSR: Examples from the behavioural sciences (to be handed out at least 24 hours before presentation of the module).

Module 5:

- World Health Organization, 1990. *Health systems research*. Background document for the technical discussion at the World Health Assembly on the role of health research in the strategy for health for all by the year 2000. WHO, Geneva, Switzerland. A43/technical discussion/3.
- Commission on Health Research for Development, 1990. Executive summary of *Health research: essential link to equity in development*. Oxford University Press, New York. pp. xvii–xix.

Module 7:

- The Trainer's Notes suggest that participants be asked to read the content of the lecture/discussion prior to the session.

Module 9:

- Handout 9.1, Behavioural challenges for health systems research.

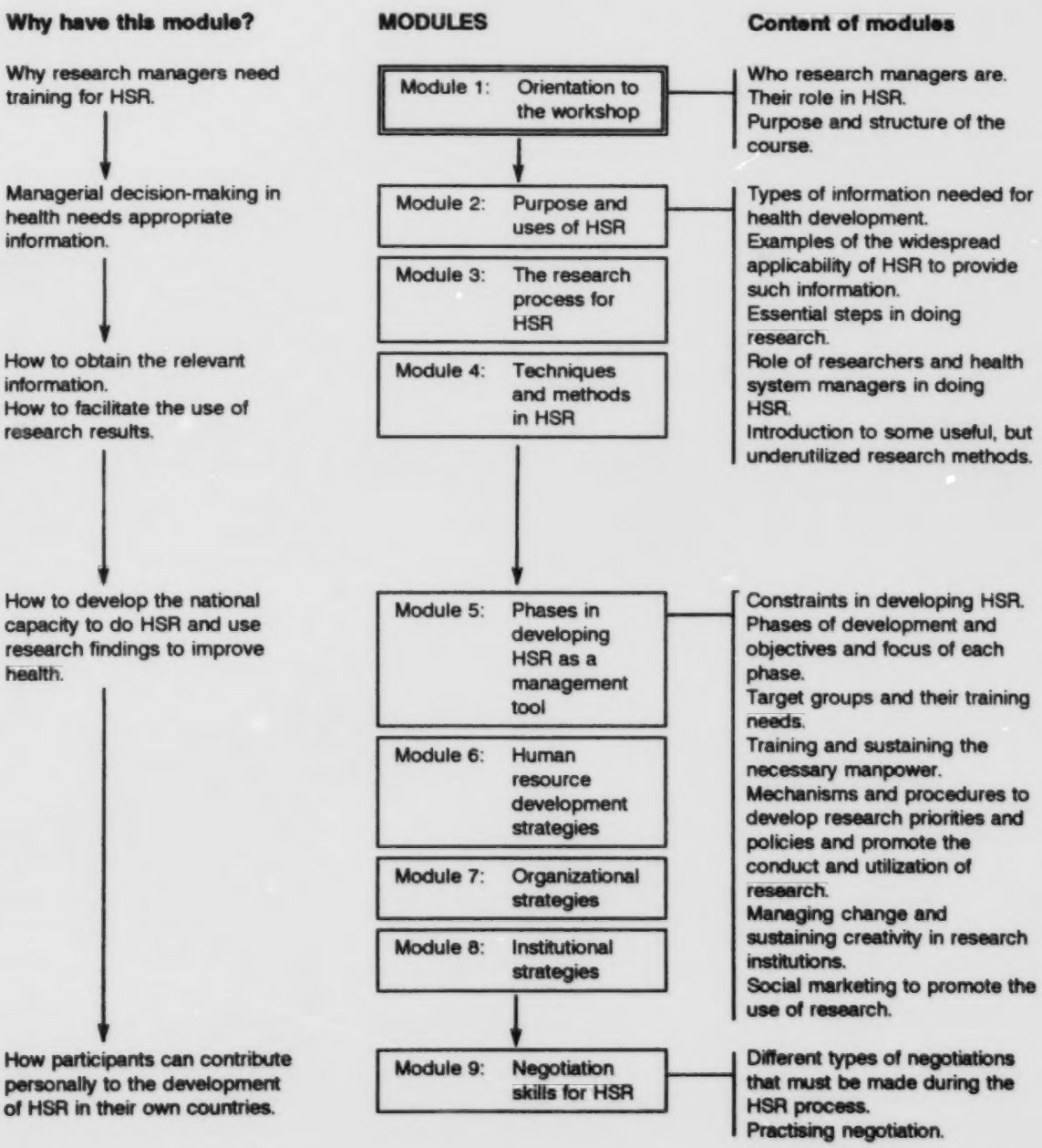
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 1:

ORIENTATION TO THE WORKSHOP

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 1: ORIENTATION TO THE WORKSHOP

OBJECTIVES

At the end of the orientation you should be able to:

1. Interact comfortably and informally with fellow participants and facilitators.
2. Recognize the context of training in HSR for research managers.
3. Describe the expected outcomes of the course.

CONTENTS

Introduction of participants and facilitators

Orientation to the course (lecture/discussion)

Trainer's notes

INTRODUCTION OF PARTICIPANTS AND FACILITATORS

The procedure for introduction should aim at setting a tone of informality that encourages free interaction and open communication. One method for "breaking the ice" which gives participants a chance to introduce each other is discussed in the Trainer's Notes.

ORIENTATION TO THE COURSE (lecture/discussion)

The purpose of training in HSR

The purpose of training in health systems research (HSR) is to increase the capacity within a country to obtain and use research information to support decision-making aimed at improving health status. Different countries are at various stages of development in relation to their capacity to conduct research that is relevant to their health problems and health needs. They also have varying capacities for using relevant research findings in managerial decision-making within the health and related sectors. In some countries, there are many severe health problems competing for scarce resources and very little capacity to conduct research that will provide information to help health managers use their resources to best effect. In other countries, there are considerable resources and expertise, but research is not addressing the issues of priority concern.

The PURPOSE OF TRAINING IN HSR is to assist in harnessing research to improve health, not only by producing better scientific technology, but also by seeking the best ways of applying the available technology to improve health status within the local context.

Within the health care system, many different categories of workers have a role in HSR. Each category needs its own type of training. For example:

1. **Policymakers and high-level managers** need to appreciate what HSR is and use it to improve decision-making for health.
2. **Health workers and mid-level managers** need to develop a capacity for critical thinking and learn how to do simple research to provide information to aid in problem-solving.
3. **Researchers and academicians** need to realign their research efforts to focus on priority health problems in the country.
4. **Research managers** need to advocate, promote, and support the development and use of HSR.
5. **Trainers** need to develop the capacity to conduct the various types of training needed for HSR.

Research managers as the focus of this course

This training course is intended for research managers. The term RESEARCH MANAGER is used in a broad sense and includes managers in the following categories of institutions:

- Institutions that have traditionally been devoted primarily to research (e.g., biomedical and social research institutions);
- Academic departments in universities (e.g., departments of community medicine, public health, primary care, sociology, economics);
- Institutions that have had primarily a training or planning function, usually in public health or nursing, but have (recently) been given a function in HSR (e.g., institutes of health, planning and development units in ministries of health);
- Units, departments, or agencies that have a function in processing research applications, approving funding for research, establishing coordinating mechanisms, etc. Such units may be located in universities, ministries of health, science and technology, social development, etc.; and
- Donor agencies that support research and development. Such agencies may be sectoral, national, regional, or international.

Rationale for identifying training needs for research managers

In designing training in HSR for research managers, it is necessary to identify the background characteristics of the research managers as well as their expected roles in relation to HSR. Training needs can then be identified based on the premise that the training will build on the research managers' existing knowledge, skills, and attitudes and help them to perform their expected roles. The background of research managers can be classified as follows:

Managers in research and academic institutions:

- Usually have done research and are familiar with the research process and research environment;
- May not be familiar with the health system or HSR; and
- Probably have had no training in management.

Managers in ministries of health, science and technology, etc., and in training institutions:

- Have probably not done research and are usually not very familiar with the research process;
- Are familiar with the health system and have been trained in health management; and
- Are not familiar with HSR or the management of research.

Purpose of training research managers in health research

The training should enable the managers to assist their institutions or organizations to contribute to and support the development of HSR in the country and the utilization of research in improving the health of the people.

Expected outcome of the training

It is expected that this training workshop will assist research managers to:

1. **Advocate, promote, and support the development of HSR and its use to improve the health of the people.**

2. **Contribute to the development and implementation of appropriate policies and strategies for:**

   - **Developing manpower for HSR;**
   - **Realigning research funding to support national health priorities;**
   - **Establishing mechanisms to stimulate and sustain good quality research in support of health development; and**
   - **Promoting the utilization of research findings in managerial decision-making.**

Course materials and method of work

The participants of this course are rich in experience and have a wide range of backgrounds and training. The course is designed to facilitate learning through sharing of experiences and opinions on a number of themes that have been organized as learning modules. Each module (excluding the handouts and trainer's notes) and the relevant reading materials will be distributed to participants at least 24 hours before the module is scheduled. Each module contains instructions regarding the distribution of the handouts. Participants will be expected to have familiarized themselves with all the material, so that the bulk of the course time can be devoted to questions and discussion rather than to presentation of the material.

Logistics

The course facilitator should provide information on transport, accommodations, meals, arrangements for group work, secretarial services, etc.

The rationale and structure of the workshop

The workshop consists of the following modules:

Module 1:	Orientation to the workshop
Module 2:	Purpose and uses of HSR
Module 3:	The research process for HSR
Module 4:	Some techniques and methods to facilitate the research process in HSR
Module 5:	Phases in developing HSR as a management tool
Module 6:	Human resources development strategies
Module 7:	Organizational strategies

Module 8: Institutional strategies
Module 9: Negotiation skills for HSR

The rationale and focus of each module is illustrated in the flowchart that appears at the beginning of each module. Each module includes:

- Reading assignments
- Lecture/discussions
- Group work sessions
- Plenary presentations

Preparation of individual plan of action

Participants will develop individual plans of action that they intend to implement when they return home. These will **not** be country plans of action, or even plans of action for the institutions in which the participants work. They will be personal statements of the activities that each participant will attempt. These plans of action will be further elaborated in modules 5 through 8.

Trainer's Notes

Module 1: ORIENTATION TO THE WORKSHOP

Introduction of participants

The introduction can be a separate 2-hour session held, if necessary, even before the official opening ceremony. All facilitators and, if possible, members of the secretariat should be invited to participate.

During the "introduction" participants should be encouraged to share information on their academic and social background as well as their interests and goals.

One method for "breaking the ice" is to pair up participants, allow 15 minutes for them to interview each other, and request that each person introduce his or her partner in a 1- to 2-minute presentation. Before the interview, participants should be instructed that they will be expected to give a brief sketch of the person they are introducing (i.e., professional as well as personal background).

Modules and reading materials

During the orientation, instructions should be given regarding the reading material that will be distributed during the workshop and when participants will be expected to complete various portions of it. A complete list of these materials should be available on day 1.

Field visit

A field visit is an optional activity that can be arranged in conjunction with the workshop. It can be used to illustrate one or more of the issues that are discussed in the workshop.

For example, visits may be arranged to any of the following:

- A district health office or a hospital where staff have done HSR projects and used the findings;
- A research institution or university department that has made efforts to stimulate HSR or participate in HSR projects or training courses;
- Program managers in the ministry of health who have been active in supporting HSR and using research results; or
- Agencies that have reoriented research funding.

During the visit, there should be a short briefing and an opportunity for questions and discussion.

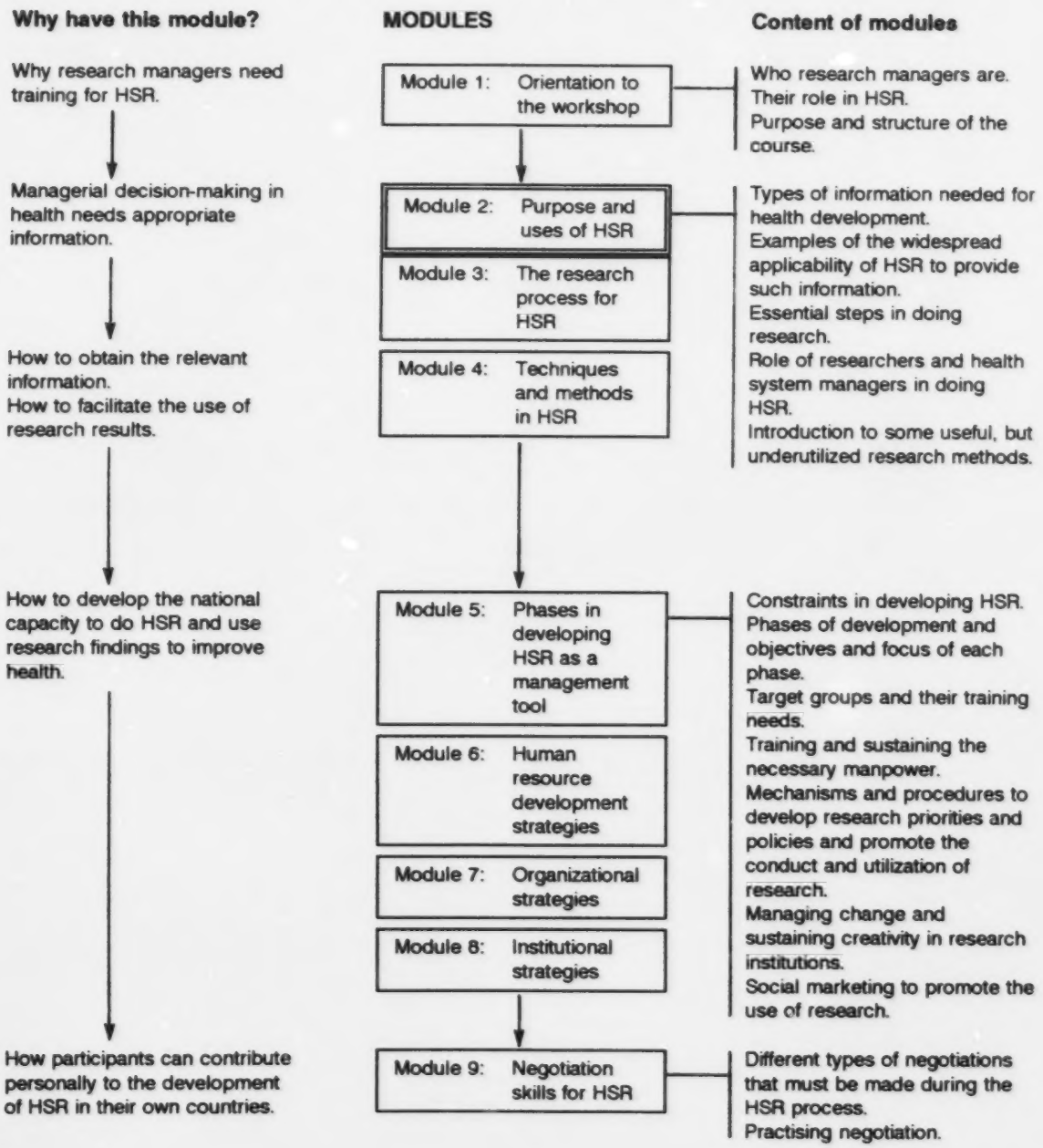
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 2:

PURPOSE AND USES OF HSR

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 2: PURPOSE AND USES OF HSR

OBJECTIVES

At the end of this session you should be able to:

1. Recognize the need for information to support changes that are required for achieving health development.
2. Recognize the widespread applicability of HSR as a tool to provide such information.
3. Identify the different types of information that may be needed for decision-making.

CONTENTS

Note to facilitators on pre-workshop assignments

The purpose and uses of health systems research (lecture/discussion)

Exercise: Analysis of the potential for using HSR

Plenary session

MATERIALS

Handout 2.1: Analysis of the potential for using HSR (to be distributed before the exercise)

Trainer's notes

NOTE TO FACILITATORS ON PRE-WORKSHOP PREPARATION

Pre-workshop preparation for participants (Annex 1 in Introduction to this Volume) consists of:

1. Pre-workshop readings for which references are provided and
2. Pre-workshop assignments for which a guideline is provided.

Copies of the pre-workshop reading material, together with Annex 1, should be sent to participants at least 1 month before the workshop.

THE PURPOSE AND USES OF HEALTH SYSTEMS RESEARCH (lecture/discussion)

Achieving health for all

Adoption of health development strategies requires countries to gear their national health development process to enable all people to reach at least the level of health that enables them to participate actively in the social and economic life of the community in which they live. To attain such a level of health, every individual should have access to primary health care and, through it, to all levels of a comprehensive health care system.

Types of managerial decisions needed

To achieve health for all, it may be necessary to:

- Reallocate resources to achieve total coverage;
- Increase accessibility to primary health-care services;
- Provide effective referral to secondary and tertiary levels of care; and
- Develop appropriate mechanisms for community participation.

Such reorientation of the health system may require changes in:

- Health policy and health planning;
- Organization and administration of health and related services;
- Financing and budgeting systems and procedures; and
- Selection and application of appropriate strategies and technology.[1]

Need for information

To effect **appropriate** changes, managers at all levels in the health system need detailed and accurate information as illustrated in Table 2.1.

---

[1] This section is derived from World Health Organization technical discussions, *Health systems research as a part of the managerial process in support of the strategy for health for all*. Regional Committee for the Eastern Mediterranean, 34th session, June 1987. EM/RC34/Tech. Disc.1.

Table 2.1. Information needed for various types of decision-making.

Type of decision-making	Type of information needed
Health policy and health planning	Types of priority health needs, cost, and acceptability of alternative strategies
Organization and administration	Availability, accessibility and use of resources
Selection and application of appropriate technology	Effectiveness, cost, acceptability, and sustainability of available options

At the present time health management information systems routinely generate a great deal of data, but much of it is not analyzed and interpreted to provide meaningful information for managers to use in decision-making.

How can HSR help?

HSR provides the means to analyze and interpret the masses of data routinely available from health information systems so as to respond to the specific information needs of managers.[2]

In addition to routinely available data, detailed data are often required for specific decisions. Specifically designed HSR studies can provide such information.

Usefulness of HSR — examples from around the world[3]

HSR has been useful:

- **In different sociocultural contexts,**
- **At different levels of health development, and**
- **At every level of management.**

---

[2] World Health Organization, 1990. *Health systems research*. Background document for the technical discussion at the World Health Assembly on the role of health research in the strategy of health for all by the year 2000. WHO, Geneva, Switzerland. A43/technical discussion/3.

[3] Note for facilitators: The examples quoted in this section are derived from the pre-workshop reading material, including *Health systems research in action* and *From research to decision making*. Other examples may be substituted to suit the participants and facilitators of each workshop.

In different countries, different contexts

HSR has provided information to **improve accessibility** to health care:

- In Botswana: for new agricultural communities;
- In Indonesia: through improved application of the risk approach for pregnant women; and
- In the USA: for economically disadvantaged groups.

HSR has also provided information to review and improve health manpower situations:

- In the Netherlands: to regulate the production of dentists in response to changing demand;
- In Malaysia: to upgrade the skills and technologies available in district hospitals to reduce bypassing; and
- In Turkey: to train auxiliary nurse midwives to insert IUDs.

HSR has contributed to the improved delivery of services:

- In Pakistan, Zimbabwe, and Egypt: through identification of missed opportunities for childhood immunization in out-patient clinics; and
- In Norway: to reduce surgical waiting lists by increasing out-patient surgery.

At every level in the management hierarchy

HSR has provided information for use:

- At the operational level: in Botswana, to improve clinic utilization by determining reasons why the community bypassed the clinic.
- At detailed programing and budgeting level: in Norway, by demonstrating that to achieve reduction of 5mmHg in the threshold for treatment of hypertension would increase the cost of antihypertensive drugs by $22 million (US).
- At the policy and broad programing level: in Venezuela, to reactivate and reorient the national program for the control of Chagas disease by diverting resources previously used for insecticide spraying to housing improvement.
- At the international level: by providing data on the trends in supply and consumption of pharmaceuticals, thereby demonstrating the grossly unequal distribution among developing and developed countries. This helped enlist support of the World Health Assembly for WHO work on a revised drug strategy.

(Substitute other examples, if appropriate.)

Types of information needed for decision-making

The type of information that may be needed for decision-making depends on the existing state of knowledge about a problem. For example:

State of knowledge about the problem	Type of information needed
A vague suspicion that some problem exists.	What is the problem?
A problem is known to exist, but there is little information about it.	What are the characteristics of the problem? (e.g., Which people are affected? How do the affected people behave? What do they think about the problem?)
There is suspicion that certain factors **may** be contributing to the problem and that others **may** be the result of the problem.	What is the relationship between the characteristics associated with the problem? (e.g., preschool education and school performance, parents' smoking habit and children's smoking behaviour, low fiber diet and carcinoma of the large intestine, contaminated water and diarrhea)
It has been established that certain factors are **associated** with the problem. Investigators hope to establish whether particular factor(s) **cause or contribute** to the problem.	What is the cause of the problem? Will the removal of a particular factor prevent or reduce the problem? (e.g., stopping smoking, providing safe water)
A sufficient amount is known about the cause to enable the development of prevention, control, or cure.	What is the effect of a specific intervention? (e.g., treatment with a specific drug; giving a particular immunization; being exposed to a specific type of health service) How effective is a specific strategy?
There are several alternative methods for dealing with the problem. It is necessary to select the most appropriate one.	Which of two alternative strategies gives better results? For the time and money expended, did we get the results desired?

Such information may be used for[4]:

- Focusing attention on a problem;
- Advocating action;
- Prioritizing problems;

---

[4] World Health Organization, 1988. *Informatics and telematics in health: present and potential uses*. WHO, Geneva, Switzerland.

- Decision-making during policy formulation and broad programing, i.e., setting long term objectives, strategies, and targets based on:
  - identified priorities and assumptions,
  - selection of intervention strategies,
  - choice of technologies,
  - human resource development,
  - choices regarding methods and levels of funding,
  - reorganization of structure or procedures, and
  - coordination with other sectors;
- Decisions during detailed programing and budgeting, e.g., resource allocation, setting of specific targets, and selecting between alternative activities;
- Decisions during operational monitoring and control (correction of inadequate compliance with the detailed program), e.g., achievement versus targets, actual use of personnel/supplies versus planned use; or
- Evaluation and reprograming, e.g., assessment of efficiency, effectiveness, and impact of decisions to revise selected aspects of programing.

EXERCISE: Analysis of the potential for using HSR

1. Overview

The purpose of this exercise is to help participants recognize the potential for the use of HSR in their own countries and to give them an opportunity to experience a focus group discussion and begin to understand its potential as a research tool. The exercise involves a period for individual reflection on the issues listed, then a focus group discussion with a workshop facilitator acting as the leader and an appointed recorder. The facilitator should take responsibility for guiding the discussion, as well as for summarizing the lessons learned from the discussion. During the subsequent plenary session, the facilitator will be responsible for making the presentation on behalf of the group.

2. Individual work

Pass out Handout 2.1. There will be a silent period (10 minutes) for individual thinking on the following issues:

> The lecture has demonstrated the use of HSR in several situations. HSR has probably been used at some time in your own country as well. Give one example of an HSR study in your country that you would like to share with your group. Briefly describe how information from the study was used to support decision-making.
>
> Now focus on the **future**. Identify examples (not more than three) from your country, of problems that require research information. Try to select examples from the different levels of management (i.e., policymaking, program management, and operational levels). For each example, consider:

EXERCISE (continued)

What types of information could research provide?
Who is likely to use such information?
What factors might discourage (or encourage) use of the information?

(Note: This exercise is not intended to produce a "national research agenda." It is only intended to stimulate participants to identify examples of the types of research that are needed at each level of management and to consider how such information could be used.

3. **Group work: focus group discussion**

Participants will work in small groups (5–8 people). A facilitator will lead the discussion in each group. Appoint a recorder (either a facilitator or a participant) to record the discussion.

Discuss the issues listed in Handout 2.1. See Trainer's Notes at the end of this module for additional guidance on the topics to be discussed. Allocate approximately half the time for discussing past studies and the remainder for discussing "future" examples. Make sure that every participant is given the opportunity to present at least one example and try to elicit examples to illustrate each level of management.

An analytic summary of the discussion will be presented by the facilitator at the plenary session. See Trainer's Notes for guidance.

PLENARY SESSION

Presentation and discussion of focus group results

The session should be chaired by the module coordinator. Analysis of each of the focus group discussions should be presented by the facilitators.

Group members should be invited to comment on whether the report of their discussion was an adequate representation of their opinions. Participants and facilitators should then be invited to contribute comments, observations, and additional experiences.

The module coordinator should end by summarizing the main points.

Overview of the focus group discussion as a research technique

The coordinator of Module 4 should give a brief (10-minute) overview of the use of the focus group discussion (FGD) as a technique that is useful in management as well as in research. The main points to be included in the overview and illustrated from the preceding exercise are:

- The use of the FGD to collect qualitative information on opinions and perceptions from a selected group, e.g., perceptions regarding HSR in their own countries;

- The functions of the FGD facilitator and how the facilitator needs to prepare for the session, e.g., the detailed instructions provided in Trainer's Notes; and

- How the data from a FGD can be analyzed.

Module 10C in Volume 2 of this HSR training series can be used as reference material by the module coordinator and distributed as a handout at the end of this module.

ADDITIONAL READING

1. Taylor, C.E. 1984. *The uses of health systems research*. WHO, Geneva, Switzerland. Public health papers 78.

2. World Health Organization, 1987. *Concepts of health behavior research*. WHO, New Delhi, India. SEARO Regional health paper no. 13.

3. Commission on Health Research for Development, 1990. *Health research, essential link to equity in development*. Oxford University Press, New York, NY. pp. 1–23.

Handout 2.1. Analysis of the potential for using HSR

Individual work

Please take about 10 minutes to consider the following issues:

The lecture has demonstrated the use of HSR in several situations. HSR has probably been used at some time in your own country as well.

- Give one example of an HSR study in your country that you would like to share with your group. Briefly describe how information from the study was used to support decision-making.

- Now focus on the **future**. Identify examples (not more than three) from your country, of problems that require research information. Try to select examples from the different levels of management (i.e., policy-making, program management and operational levels). For each example, consider:

  What types of information could research provide?
  Who is likely to use such information?
  What factors might discourage (or encourage) their use of the information?

(Note: This exercise is not intended to produce a "national research agenda." It is only intended to stimulate participants to identify examples of the types of research that are needed at each level of management and to consider how such information could be used.)

Group work: Focus group discussion

Work in the focus group to which you are assigned to discuss the topics listed above. Use about half the time for discussing studies and the remainder for discussing examples for the future.

Trainer's Notes

Module 2: PURPOSE AND USES OF HSR

Introduction

Module 2 has the first exercise in the workshop and it should be used to establish rapport and create an atmosphere of comfortable interaction so as to facilitate the exchange of experiences and views and optimize the learning process.

Facilitators will have to prepare themselves for the content of the session as well as become familiar with the focus group discussion technique to be used in the exercise. This preparatory review should be completed prior to the workshop because the exercise will be on day 1.

Preparatory reading for facilitators

1. Read the introduction to Modules 1 and 2.

2. Read the pre-workshop reading assignments for participants and the additional reading.

3. Read Module 10C, Focus group discussion, in the HSR training series, Volume 2, *Designing and conducting health systems research projects*. IDRC/WHO 1991.

Managing the focus group discussion

1. Introduce and set the tone for the session (see Module 10C, Volume 2, of this HSR training series).

2. Present the objectives of the exercise and summarize the topics to be discussed. Display the topics on a flip chart.

3. Use the following as a guide to stimulate or focus the discussion on PAST EXPERIENCE.

   Invite each participant to describe one example of an HSR study, the information it generated, and how this information was used. During the discussion, the facilitator should try to elicit the following points regarding each example:

   - Regarding the *contents* of the study:
     - What were the objectives of the study?
     - What were the major findings?
     - Did you (personally) accept the findings as valid and reliable?

   - Regarding the *use of findings*:
     - Who did the study and who used the results?
     - Were the results suitable for use at the policy, program management, or operational level?
     - Was there any direct communication between researcher and potential users. If yes, did this happen before, during, or after the study?

In the discussion on the use of research findings, focus attention on the fact that research information is more likely to be used if it is valid and relevant and sufficient attention has been given at an early stage of the study to a joint analysis of the problem by researchers and managers. These two groups should work together to determine the precise nature of the research information that is required and to identify the potential users of such information, and what factors are likely to discourage or encourage the use of the information.

[Note that the issue of how to facilitate the use of research information will be elaborated in Module 3 and the discussion here is intended to stimulate participants to think about the issue before it is covered in subsequent modules.]

4. Use the following as a guide to focus the discussion on the FUTURE.

   The purpose of this section of the exercise is to enable participants to recognize that research information may be needed to resolve problems at **each** level of management.

   At the policy level what is needed may be very complex information derived from several components of the health system (e.g., political, economic, manpower, community, sociocultural), whereas at the operational level it may be simple information (e.g., waiting time in clinics, children attending hospital clinics who are eligible for an immunization, but do not receive it).

   If the examples offered by participants focus on only one particular level of management, facilitators should pose questions related to the information needs of the other levels of management.

5. After the FGD, each facilitator should analyze the results of the session he or she led and then report on it during the plenary session that follows. **(It may be necessary to schedule a break before the plenary session to allow time for the analysis.)**

   The focus group discussion should be analyzed and reported using a framework that will illustrate the points that have been elaborated in the module or are expected to be used in the subsequent modules. One useful framework for analyzing examples from the PAST is to ask:

   - Were the studies aimed at providing information for managerial decision-making?
   - Which levels of management could have used the results?
   - At what levels of management were the results used?
   - What factors contributed to the use or non-use of results?

Level of management	Potential for use of results	Actual use of results	Factors contributing to use/non-use
Policy			
Program management			
Operational control			

A similar framework could be used for analyzing the suggestions for FUTURE studies.

Based on the analysis, facilitators should endeavour to identify generic lessons that can be derived from the examples discussed. Such lessons might include that, for example:

- There is a need to maintain a scientific rigor in design and derivation of conclusions so that the research information will be credible to the manager.
- Research information initially designed for the needs of one particular level of management could be eventually used by other levels as well.
- Consideration should be given to how the researcher and potential user can be brought together.
- Donor agencies may be regarded as potential users of information.

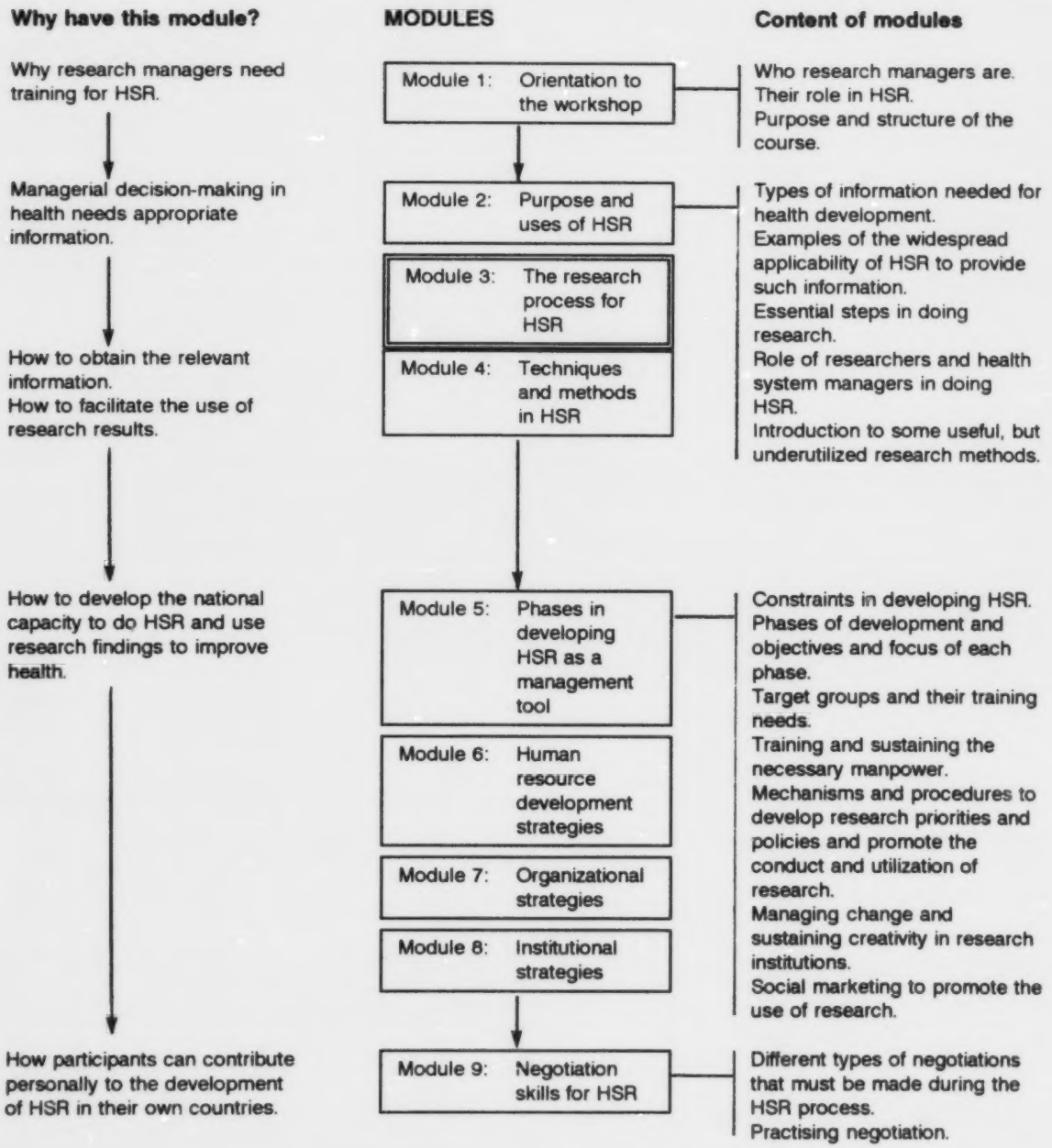
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 3:

THE RESEARCH PROCESS FOR HSR

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 3: THE RESEARCH PROCESS FOR HSR

OBJECTIVES

By the end of the session you should be able to:

1. Describe the characteristics of HSR.
2. Describe and illustrate different types of study designs in research.
3. Recognize how different study designs are used to provide different types of information.
4. Describe the stages of a typical HSR process.
5. Identify the roles of researchers and managers in the implementation of HSR.

CONTENTS

Reading assignment for participants prior to the presentation of this module:

- Module 9, Study types, from Volume 2 of this HSR training series.
- Taylor, C.E. 1984. The choice of methods. In *The uses of health systems research*. WHO, Geneva, Switzerland. Public health papers no. 78. Chapter 2, pp. 22–41.
- World Health Organization, 1988. *Health systems research in action*. WHO, Geneva, Switzerland. pp. 12–15.

Characteristics of HSR and the research process (lecture/discussion)

Group exercise: The role of researchers, health mangers, and the community in the research process in HSR

Plenary session

MATERIALS

Handout 3.1: Stages in the research process (to be handed out at the beginning of the module)

Handout 3.2: Worksheet for use during the group exercise (to be handed out before the exercise)

Handout 3.3: Steps in the research process for HSR: roles of researchers, managers, and the community (to be handed out during the plenary session)

Trainer's notes

CHARACTERISTICS OF HSR AND THE RESEARCH PROCESS (lecture/discussion)[1]

The previous module dealt with the purpose and uses of HSR. This module will explore the special characteristics of HSR and the research process in HSR.

What is research?

RESEARCH is a systematic search for information and new knowledge. It serves two essential and powerful purposes in accelerating advances in health.

First, basic or traditional research is necessary to generate new knowledge and technologies to deal with major unresolved health problems.

Second, applied research is necessary to identify priority problems and to design and evaluate policies and programs that will deliver the greatest health benefit, making optimal use of available resources.

During the past two (or even three) decades, there has been a rapid evolution of concepts and research approaches to support health development. Many of these have been described by specific terms such as operations research, health services research, health manpower research, policy and economic analysis, applied research, and decision-linked research. Each of these has made crucial contributions to the development of HSR.[2]

Characteristics of HSR

Bearing in mind that HSR is undertaken primarily to provide information to support decision-making that can improve the functioning of the health system, some essential features of successful HSR are summarized below.

HSR should focus on priority problems in health care. It should be action-oriented and aimed at developing solutions.

The rationale for the above characteristics has been dealt with in the previous module.

HSR should be multidisciplinary.

---

[1] Much of this section is an adapted version of Modules 2 and 9 of Volume 2, Part I of this HSR training series.

[2] World Health Organization, 1990. *Health systems research*. Background document at the World Health Assembly technical discussion, May 1990. WHO, Geneva, Switzerland. A43/technical discussion/3.

The aim of HSR is to provide health managers at all levels with the relevant information they need to make decisions on problems they are facing.

We must be aware that problems at one level of the health system are usually connected with problems or deficiencies at other levels. HSR should recognize this, as otherwise we run the risk of coming up with results that only partially explain the problem and are, therefore, insufficient to solve it.

For example, in the study concerning the control of Chagas disease in Venezuela, the researchers analyzed information on the environment (living conditions), the community (participation in health and related activities), and individuals and families to provide sufficient information to improve the disease control strategies.[3] Figure 3.1 highlights some major areas of concern within the health system.

Many issues in particular areas of concern are interrelated and interact with issues in other areas. Research on health systems must recognize this. During the analysis of a problem, researchers should identify all the critical areas in which research will be needed to provide information for dealing with the problem. The research skills that are needed may come from a variety of disciplines (e.g., medicine, epidemiology, behavioural sciences, economics). This makes HSR multidisciplinary in nature. Figure 3.2 illustrates the types of disciplines that may be needed in HSR.

Even the simpler research that is done at the operational level may require research skills from several disciplines (e.g., epidemiology, sociology, management) to provide sufficient and relevant information to support decision-making.

Researchers who will work in multidisciplinary teams will need to acquire a basic understanding of the concepts and approaches as well as the potential and limitations of research techniques used in sister disciplines.

Health systems research, however, is not the concern of scientists alone.

Who should be involved in HSR?

HSR should be participatory in nature.

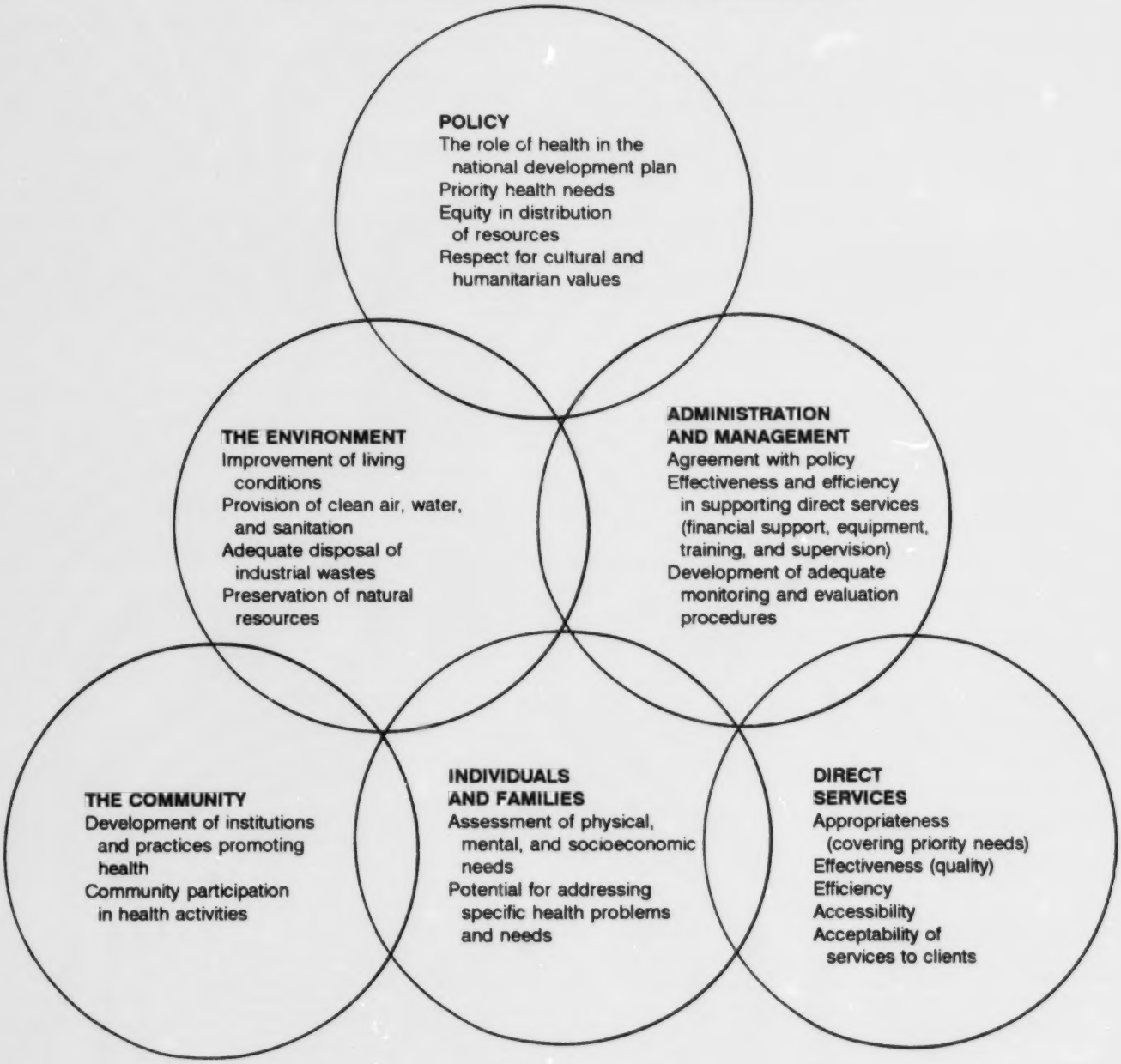
The participatory nature of HSR is one of its major characteristics. To ensure that the research is relevant and appropriate, everyone directly concerned with a particular health or health care problem should be involved in the research project(s) focused on it. Participants might include policymakers, health managers from the health services involved, health care providers, and members of the community, as well as researchers. This involvement is critical if the research activities are to make a difference.

- If decision-makers are involved only after completion of the study, the report may just be shelved.

---

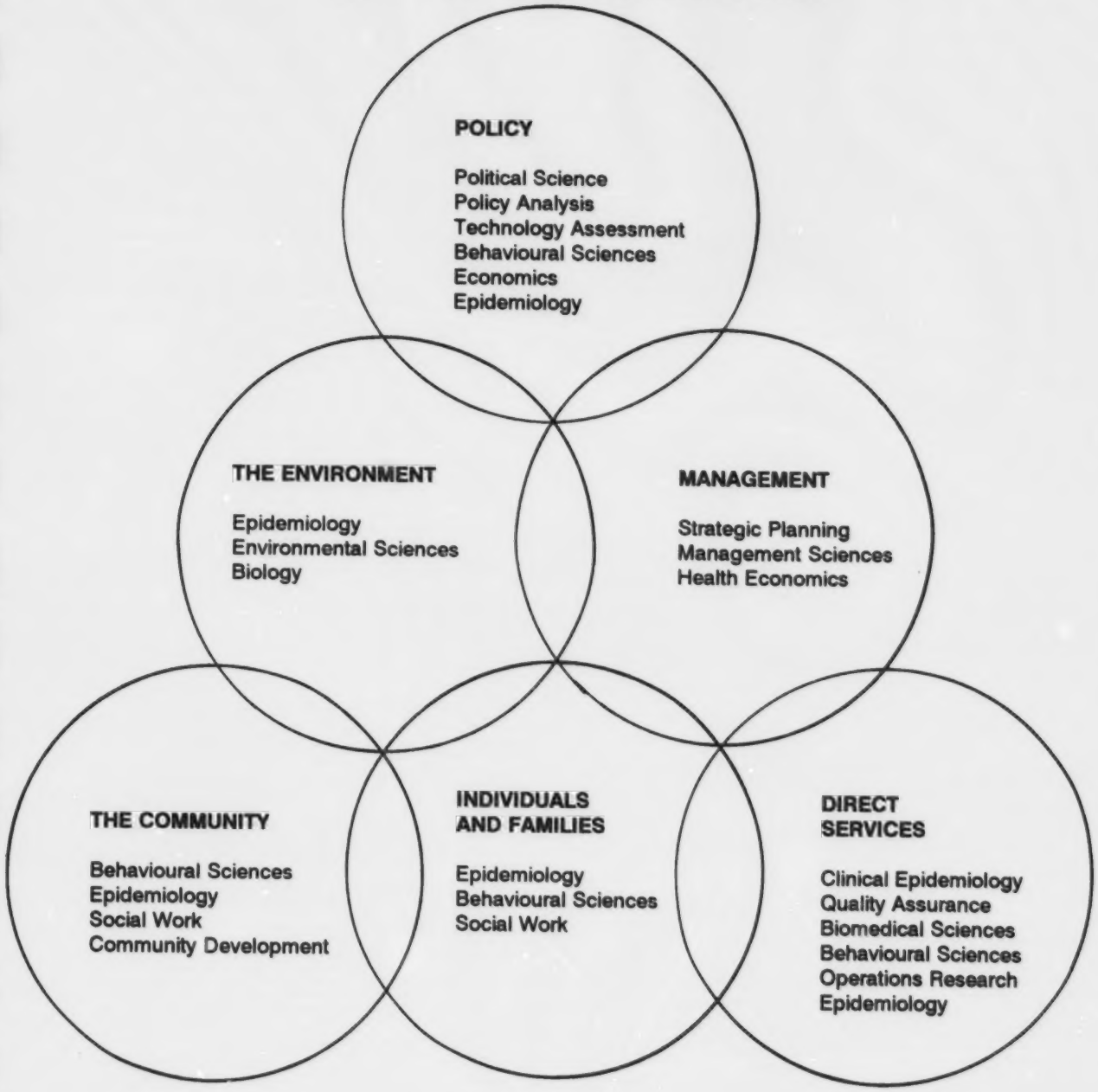
[3] World Health Organization, 1990. *From research to decision-making: case studies on the use of health systems research*. WHO, Geneva, Switzerland. SHS/HSR/902.

Figure 3.1. Areas of major concern within the health system.


POLICY
The role of health in the national development plan
Priority health needs
Equity in distribution of resources
Respect for cultural and humanitarian values
THE ENVIRONMENT
Improvement of living conditions
Provision of clean air, water, and sanitation
Adequate disposal of industrial wastes
Preservation of natural resources
ADMINISTRATION AND MANAGEMENT
Agreement with policy
Effectiveness and efficiency in supporting direct services (financial support, equipment, training, and supervision)
Development of adequate monitoring and evaluation procedures
THE COMMUNITY
Development of institutions and practices promoting health
Community participation in health activities
INDIVIDUALS AND FAMILIES
Assessment of physical, mental, and socioeconomic needs
Potential for addressing specific health problems and needs
DIRECT SERVICES
Appropriateness (covering priority needs)
Effectiveness (quality)
Efficiency
Accessibility
Acceptability of services to clients

Adapted from Purola, T. 1986. *Training course on health planning*. University of Helsinki.

Figure 3.2. Multidisciplinary skills needed in HSR.



- If health staff are involved only in data collection and not in the development of the proposal or in data analysis, they may not be motivated to collect accurate data or carry out the recommendations.
- If the community is only asked to respond to a questionnaire, the recommendations from the study may not be acceptable.
- If professional researchers are not involved in the implementation of recommendations, they may have little concern for the feasibility of these recommendations.

Other important characteristics of HSR are:

- Studies should be scheduled in such a way that results will be available when needed for key decisions. Otherwise, the research loses its purposes, i.e., research must be timely.

- Emphasis should be placed on comparatively simple, short-term research designs that are likely to yield practical results relatively quickly. Simple but effective research designs are difficult to develop, but much more likely to yield useful results when needed.

- The principle of cost-effectiveness is important in the selection of research projects. Operational research should focus, to a large extent, on low-cost studies that can be undertaken by management and services personnel in the course of daily activities. (There is a need for some larger studies as well, however, that may require outside funding.)

- Results should be presented in formats most useful for administrators, decision-makers, and the community. Each report should include:

  - A clear presentation of results with a summary of the major findings adapted to the interests of the audience being targeted by the report;
  - Honest discussion of practical or methodological problems that could have affected the findings; and
  - Alternative courses of action that could follow from the results and the advantages and drawbacks of each.

- Evaluation of the research should not be based on the number of papers published, but on its ability to influence policy, improve services, and ultimately lead to better health. Thus an HSR project should not stop at finding answers to the questions posed, but should include an assessment of what decisions have been made based on the results of the study.

Study designs

In research, many different kinds of questions may be posed. Depending on the existing state of knowledge about a problem that is being studied, different types of questions may be asked which require different study designs. Some examples are given in Table 3.1.

All of the disciplines that contribute to HSR use these types of study designs and, therefore, have a common methodological basis.

Table 3.1. Research questions and study designs.

State of knowledge of the problem	Type of research questions	Type of study design
Knowing that a problem exists, but knowing little about its characteristics or possible causes.	What is the nature/magnitude of the problem? • Who is affected? • How do the affected people behave? • What do they know, believe, think about the problem?	Exploratory or descriptive studies: • descriptive case studies, • cross-sectional surveys.
Suspecting that certain factors contribute to the problem.	Are certain factors indeed associated with the problem? (e.g., is lack of preschool education related to low school performance? Is low-fibre diet related to carcinoma of the large intestine?)	Analytical (comparative) studies: • cross-sectional comparative studies, • case-control studies, • cohort studies.
Having established that certain factors are **associated** with the problem, desiring to establish the extent to which a particular factor **causes or contributes** to it.	What is the cause of the problem? Will the removal of a particular factor prevent or reduce the problem (e.g., stopping smoking, providing safe water)	Cohort studies. Experimental or quasi-experimental study designs.
Having sufficient knowledge about cause to develop and assess an intervention which would prevent, control or solve the problem.	What is the effect of a particular intervention/strategy? (e.g., treating with a particular drug; being exposed to a certain type of health education) Which of two alternative strategies gives better results? Are the results in proportion to time/money spent?	Experimental or quasi-experimental study designs.

Several classifications of study types are possible, depending on what research strategies are used. Usually a combination of strategies is used, including:

1. **Nonintervention studies**, in which the researcher just describes and analyzes researchable objects or situations, but does not intervene; and

2. **Intervention studies**, in which the researcher manipulates objects or situations and measures the outcome.

Noninterventional studies may include:

- Exploratory studies;

- Descriptive studies that may be descriptive case studies or cross-sectional surveys; and
- Comparative (analytic) studies that may be cross-sectional, case-control, or cohort studies.

Intervention studies may be:

- Experimental; or
- Quasi-experimental.

It is not within the scope of this module to discuss the characteristics and uses of each of the study types.[4] However, to illustrate how some of the less commonly used study types can be applied in HSR, a few examples are given below.

Descriptive case studies describe in-depth the characteristics of one or a limited number of "cases." A case may be, for example, a patient, a health centre, or a village. Such a study can provide useful insight into a problem. Such case studies are common in social sciences and management sciences, as well as clinical medicine. For example, in clinical medicine the characteristics of a hitherto unrecognized illness may be documented as a case study. This is often the first step toward building up a clinical picture of that illness. Such case studies do not attempt to establish the causes of the illness.

A case-study approach such as this has been used in HSR, for example, in a situation where some village health committees are functioning well and others less well. Two contrasting committees are selected (one functioning well, the other not). A case study is done on both to determine the characteristics of each of the committees to identify the special characteristics that are found in one, but not the other. Such characteristics may or may not contribute to effective functioning.

Analytic studies are concerned with the comparison of two or more study groups. These studies try to find answers to questions like, What are the (possible) contributing factors to a problem of ill-health, or any other phenomenon under study?

The comparative cross-sectional survey, case-control (retrospective), and cohort (prospective) study designs are well known and used in many disciplines and will not be further elaborated here.

Each design used in **intervention studies** carries its own strength with respect to the certainty of causal attribution and the feasibility of applying the design. It is often presumed that it is not feasible to apply the classical **experimental study design** in HSR because of the practical difficulties of randomly assigning study subjects to a control group and study groups in real-life settings. However, there are several situations where this is feasible.

For example, to assess the effectiveness of a post-partum health education program on childhood immunization, mothers who deliver in a particular hospital may be randomly assigned to two groups. In one group the mothers are given intensive education on childhood immunization before they are discharged from the hospital; in the other, they are not. The immunization coverage of their infants is assessed when the children reach 1 year of age to determine whether the intensive educational approach is effective.

---

[4] See Module 9, Study types, of Volume 2, Part I, of this HSR training series for more details on the various common types of studies used in HSR.

The **quasi-experimental design** is much more common in HSR because it does not use random assignment of subjects to intervention and control groups. Instead it selects two groups that occur naturally and uses one as the control group and the other as the intervention group, assuming that the starting positions of both are more or less similar.

The research process

As with all research, the development of an HSR project goes through several stages. Defined at their most general level these stages are:

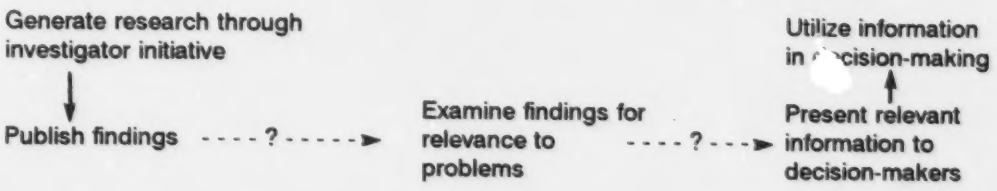
1. Identification of areas of concern;
2. Prioritization of the problem and generation of a problem statement;
3. Formulation of a research protocol;
4. Approval and funding of the projects;
5. Implementation of the research projects; and
6. Utilization of the research results.

A more detailed illustration of this process is provided in Handout 3.1, which can be distributed to participants.

Linking research to decision-making[5]

Traditionally, in most types of research the research process is initiated by researchers who design and implement studies on the basis of individual interests, sources of funding currently available, or their own perceptions of what might be useful to decision-makers. Findings *may* subsequently be examined for relevance. Pertinent information *may* then be brought to the attention of decision-makers. Efforts *might* follow to determine if and how the information could help in decision-making. Increasing the volume of this type of research, it is argued, will raise the probability that at least some of the findings will filter through to the appropriate decision-makers, be perceived by them as relevant, and be incorporated into the decision-making process (Figure 3.3).

Figure 3.3. The "usual" research process.


Generate research through investigator initiative
Publish findings
? ► Examine findings for relevance to problems
? ► Present relevant information to decision-makers
Utilize information in decision-making

[5] World Health Organization, 1986. *Improving health care through decision linked research: application in health systems and manpower development*. WHO, Geneva, Switzerland. MMD/86.4.1

Past experience, however, has underscored some of the difficulties and uncertainties inherent in this process. Research findings may bear little relevance to key decisions being made. They may represent answers (possibly accurate answers) to questions that the decision-makers are not asking. Because the latter were not involved in formulating the research questions, they may show little interest in supporting the research or in being guided by its findings. Although a high volume of research output may be attained, its actual impact on decisions taken may be minimal. The drive to generate new research, almost as a goal in itself, may encourage redundancy and wastage through duplication of efforts.[6]

Interaction between researchers and managers

Because the purpose of HSR is to provide information for decision-making, it is extremely important that the research process facilitate the subsequent use of the findings. This can be done through interaction between researchers and managers. Table 3.2 illustrates the various stages in the research process at which interactions could be initiated and summarizes the expected outcome of the interactions.

Table 3.2. Expected outcome of researcher–health service manager interaction.

Timing of initial interaction	Expected outcome of the interaction
Before developing the research.	Research findings are most likely to be perceived as relevant and to be utilized.
Concurrent with developing the research design.	Design modifications are possible and increase the possibility of utilization of findings.
During the collection or analysis of data.	Findings may or may not be utilized.
Following completion and documentation of the research.	Use of findings is likely to be limited to the managers selecting "pertinent information."
Upon availability of documented research findings.	Findings may never reach the attention of managers.

[6] Ibid.

GROUP EXERCISE: The roles of researchers, health managers, and the community in the research process

Introduction

Interaction between the researcher and the consumers of the research findings is useful for a number of reasons. For example:

- The research is more likely to be focused on priority problems;
- There is more likely to be administrative and logistic support during the process;
- The research process is less likely to interrupt or interfere with ongoing health services; and
- The research findings are more likely to be understood, accepted, and utilized.

To achieve these outcomes, interaction between researchers, health service managers, and the community is necessary at many stages in the research process. However, unless each party understands and accepts the most appropriate contributions of the others at various stages, this interaction may be unproductive.

Exercise

Ask the participants to work in small groups. If they haven't yet read Handout 3.1 (Stages in the research process), they should first spend some time individually reviewing this handout. Then the group members should work together to complete the worksheet provided in Handout 3.2.

The worksheet lists in detail the various steps in the research process. Participants are requested to consider each step and identify the roles (if any) of researchers, managers, and the community.

The results of the group work should be presented in the plenary session by a representative of the group.

PLENARY SESSION

Reports and discussion of the results of the group exercise

The module facilitator should chair the reporting session, while the other facilitators serve as resource persons. Each group should be asked to present its report on the role of researchers, managers, and the community in the HSR process. (See Trainer's Notes for further information.)

The module facilitator can use Handout 3.3 to highlight and supplement the points made in the groups' presentations. Handout 3.3 can be distributed to the participants after the group presentations and additions and changes can be made in it, based on the groups reports, if desired.

Discussion of special characteristics of the research process in HSR

Using the group presentations as a take-off point, the module facilitator can initiate a discussion of the special characteristics of the research process in HSR.

Some of the points that should be considered are summarized below. The participants may identify some of these issues, as well as others, and the facilitators can add to the discussion as necessary.

1. Problem selection and analysis

In other types of research, the researcher usually selects a problem based on his own familiarity with it and the literature on the topic. As a result, he or she usually has a good understanding of the subject area before selecting the topic for research. In HSR, because it is the managers who will be mainly identifying the problem for the research, the researchers are often confronted with a topic with which they are not familiar. Therefore, not only do they need the manager's input in understanding the problem, they also may need to educate themselves on the subject area itself. They may have to use a number of approaches to learn more about the subject rapidly (e.g., by reading relevant materials, by discussing it with concerned or involved individuals, and by visiting the community, health facility, and other potential study areas and making personal observations) before developing the research project.

The problem analysis itself is a complex activity because it should involve interaction among persons who have a number of different perspectives (e.g., researchers, managers, health service personnel, community members). The perceptions, motivations, and vocabulary of these groups are likely to be diverse. Special techniques are needed to manage this process effectively. A subsequent module will describe some of the techniques that are useful in this process.

2. Literature review

Much of the literature relevant to HSR is "fugitive" literature, i.e., unpublished. Special efforts will be needed to locate and retrieve materials that may be found, for example, in official files, unpublished reports, and official documents.

3. Research methodology

Special attention will be needed to ensure that appropriate methodologies from various research disciplines are used. Researchers will need to familiarize themselves with the concepts and methods of other disciplines and recognize their uses and limitations.

4. Work plan, budget, and administration

HSR projects may range from large complex studies undertaken by research institutions to simple operational studies completed within a particular health service setting. The arrangements for each of these will necessarily be very different.

Health service staff are often involved as data collectors. In HSR, they should be involved as members of the research team, be made familiar with the study design, and be given the opportunity to share in the analysis and interpretation of findings. If they are involved in this way, they will be much more likely to utilize the findings in their day-to-day work.

5. The fieldwork phase

Because many HSR studies are evaluative in nature, it is necessary to make a special effort to avoid defensive reactions and hostility from health service staff and community leaders. Time and effort must be invested early to open communication channels and involve everyone concerned in the research process.

6. Report writing and utilization of results

As in all forms of research, researchers must report the main findings of the study, based on analysis of the data, and draw conclusions. In addition, because HSR is action-oriented, researchers will be expected to make recommendations. Managers frequently comment that they don't need research to merely describe problems that they were already aware of. They want to know what to do about them. In addition, the researchers may suggest that the study results indicate new problem areas that need further study.

The main findings, conclusions, and recommendations should be communicated to several audiences, including:

- Planners/decision-makers,
- Other researchers, and
- The general public.

The report must be distributed quickly. It could be made available in several forms:

- A full report for the researchers themselves and those who are interested in reviewing the methodology and findings in detail;
- A scientific publication in a recognized journal or research report series;
- An executive summary or abbreviated report for planners and decision-makers with an emphasis on practical recommendations; and
- A "layman's report" that may be used for communicating with the community, the press, etc.

Each of these reports must have an appropriate summary and must be written in a language and style adapted to the target audience. (Refer to Trainer's Notes for some of the points that should be considered. Participants themselves will probably identify other issues.)

Closing summary

In closing, the module facilitator should summarize the roles of researchers, managers, and the community in the research process and the most important special characteristics of the research process in HSR.

Handout 3.1. Stages in the research process

The stages in the research process for HSR are similar to those in any other type of research. However, because of the participatory, problem-oriented, and multidisciplinary nature of HSR, there are special characteristics associated with several of these stages.

Most participants are familiar with the various stages of the research process. This handout provides a brief overview of these stages for the group exercise during which the roles of researchers, health service managers, and the community in the research process will be identified. The exercise will form the basis of the subsequent discussion during the plenary session, when the special characteristics associated with the HSR process will be discussed.

Selection and analysis of the problem

In other types of research, this step may be implicit and subsumed under the literature review and generation of the problem statement. In HSR, it is important to be explicit about this step because it involves:

- Specifying the need for new information;
- Assessing whether the required information is available from an already existing source;
- If it is not, deciding whether a study is likely to produce appropriate information; and
- Applying criteria for assessing the priority of various research topics. The following criteria should be considered in selecting topics:
    - the social and economic relevance of the target problem,
    - the scientific significance of the new knowledge that could be obtained for developing better interventions for health,
    - avoidance of duplication,
    - the feasibility of completing the project given the available resources,
    - the political acceptability of the topic,
    - the applicability of the possible findings and recommendations,
    - the urgency of the need for the data, and
    - ethical considerations;
- Analyzing the problem so as to identify the various components of the health system that are involved in the problem and their need to be included in the research, as well as to include the relevant research disciplines in further development of the research plan.

Generation of the problem statement

A major step in the generation of the problem statement is the specification of the subject of the study. It may not be possible to tackle the target problem(s) requiring research all at once, due to limited resources. Therefore, the research team must decide which aspect(s) of the target problem will be researched first.

Formulation of the research proposal

This is the major task in the process of developing a research project. The proposal draws on all the preparatory steps of the research process and pulls them together in a document describing the rationale and the methodology proposed for the research. The proposal is a basis for approval and funding.

After approval, the proposal is used as a blueprint during implementation of the project.

The major components of the research proposal are:

1. **Introduction**

    1.1. Background information
    1.2. Statement of the problem
    1.3. Literature review

2. **Objectives**

3. **Methodology**

    3.1. Study type, variables, data-collection techniques
    3.2. Sampling
    3.3. Plan for data collection
    3.4. Plan for data processing and analysis
    3.5. Ethical considerations
    3.6. Pre-test

4. **Project management**

    4.1. Staffing and workplan
    4.2. Administration and monitoring
    4.3. Plan for utilization and dissemination of results

5. **Budget**

    5.1. Budget
    5.2. Budget justification

Annex 1. References
Annex 2. List of abbreviations (if applicable)
Annex 3. Data-collection instruments (including questionnaires)

The steps in the development of a research proposal are illustrated in the first part of Figure 3.4.

It is important to note that in HSR the nature of the problem being researched may make it important that the design of the study and the data-collection techniques involve the input of a combination of research disciplines (e.g., epidemiology, sociology, economics). A subsequent module in this course will elaborate on this issue and others.

Approval and funding

The process for approval and funding of the project will depend on the particular project, the institutions involved, and the national and international procedures that are applicable. These will be the focus of a subsequent module and will not be considered further here.

Implementation of the project — its reiterative nature

Figure 3.4 outlines the stages in development and implementation of the project as though the research process is linear and sequential to facilitate the recognition of each step as an explicit and discrete activity that should be given adequate recognition. The research process, however, is not linear, but reiterative and cyclical in nature. Any one of the steps may need to be reviewed and revised as a consequence of a subsequent step. For example, the objectives may need to be revised after considering the sampling, data-collection methods, or staffing of the project.

Figure 3.4A. Steps in the development of an HSR proposal.

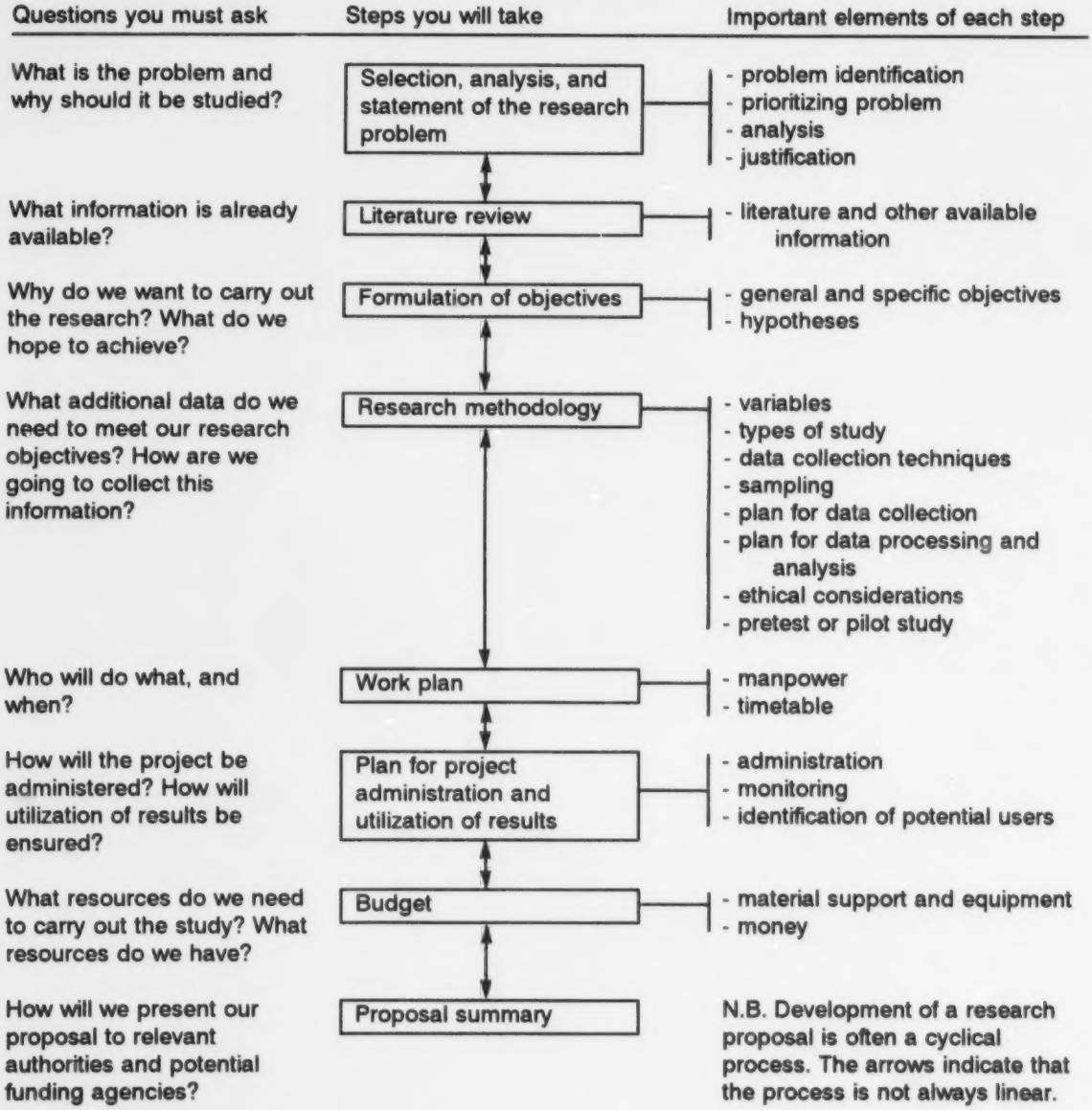

Questions you must ask
Steps you will take
Important elements of each step
What is the problem and why should it be studied?
Selection, analysis, and statement of the research problem
- problem identification
- prioritizing problem
- analysis
- justification
What information is already available?
Literature review
- literature and other available information
Why do we want to carry out the research? What do we hope to achieve?
Formulation of objectives
- general and specific objectives
- hypotheses
What additional data do we need to meet our research objectives? How are we going to collect this information?
Research methodology
- variables
- types of study
- data collection techniques
- sampling
- plan for data collection
- plan for data processing and analysis
- ethical considerations
- pretest or pilot study
Who will do what, and when?
Work plan
- manpower
- timetable
How will the project be administered? How will utilization of results be ensured?
Plan for project administration and utilization of results
- administration
- monitoring
- identification of potential users
What resources do we need to carry out the study? What resources do we have?
Budget
- material support and equipment
- money
How will we present our proposal to relevant authorities and potential funding agencies?
Proposal summary
N.B. Development of a research proposal is often a cyclical process. The arrows indicate that the process is not always linear.

Figure 3.4B. Steps in the research process during fieldwork.

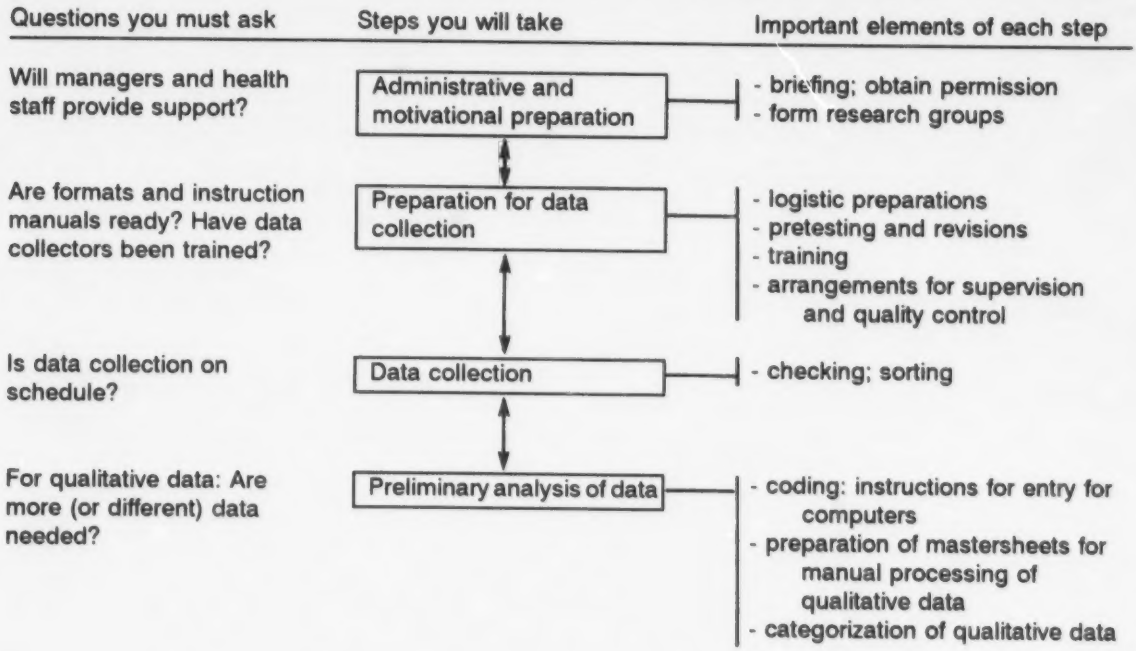
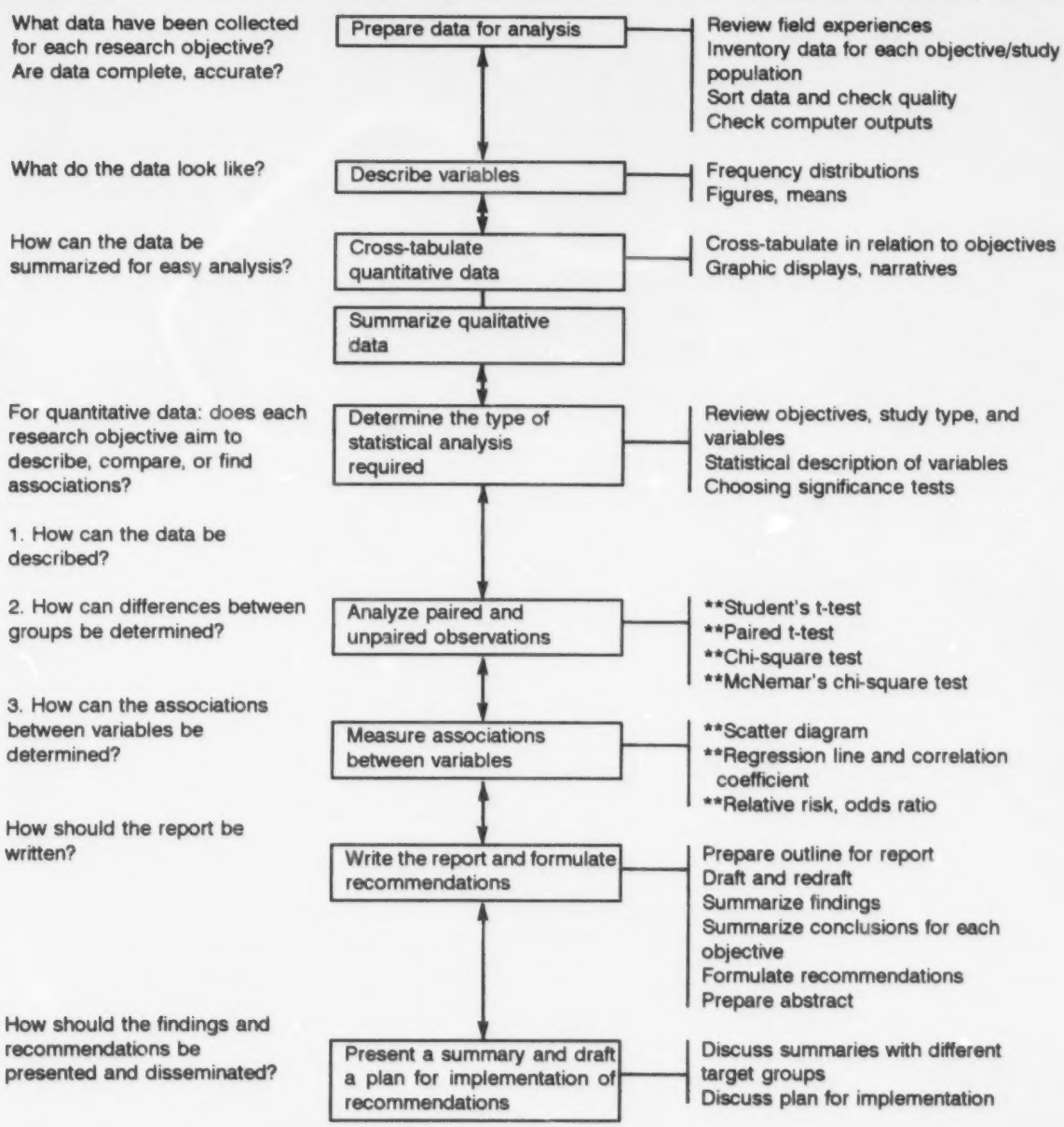

Questions you must ask
Steps you will take
Important elements of each step
Will managers and health staff provide support?
Administrative and motivational preparation
- briefing; obtain permission
- form research groups
Are formats and instruction manuals ready? Have data collectors been trained?
Preparation for data collection
- logistic preparations
- pretesting and revisions
- training
- arrangements for supervision and quality control
Is data collection on schedule?
Data collection
- checking; sorting
For qualitative data: Are more (or different) data needed?
Preliminary analysis of data
- coding: instructions for entry for computers
- preparation of mastersheets for manual processing of qualitative data
- categorization of qualitative data

Figure 3.4C. Steps in the research process during data analysis and presentation of the report.


Questions you must ask
Steps you will take*
Important elements of each step
What data have been collected for each research objective? Are data complete, accurate?
Prepare data for analysis
Review field experiences
Inventory data for each objective/study population
Sort data and check quality
Check computer outputs
What do the data look like?
Describe variables
Frequency distributions
Figures, means
How can the data be summarized for easy analysis?
Cross-tabulate quantitative data
Cross-tabulate in relation to objectives
Graphic displays, narratives
Summarize qualitative data
For quantitative data: does each research objective aim to describe, compare, or find associations?
Determine the type of statistical analysis required
Review objectives, study type, and variables
Statistical description of variables
Choosing significance tests
1. How can the data be described?
2. How can differences between groups be determined?
Analyze paired and unpaired observations
**Student's t-test
**Paired t-test
**Chi-square test
**McNemar's chi-square test
3. How can the associations between variables be determined?
Measure associations between variables
**Scatter diagram
**Regression line and correlation coefficient
**Relative risk, odds ratio
How should the report be written?
Write the report and formulate recommendations
Prepare outline for report
Draft and redraft
Summarize findings
Summarize conclusions for each objective
Formulate recommendations
Prepare abstract
How should the findings and recommendations be presented and disseminated?
Present a summary and draft a plan for implementation of recommendations
Discuss summaries with different target groups
Discuss plan for implementation

* These steps need not be in the sequence in this diagram. The sequence may be adjusted according to the needs of the workshop.

** These elements are optional and may be omitted if not relevant in a particular course.

Handout 3.2. Worksheet for the group exercise

Steps in the research process	Role of researchers	Role of health service managers	Role of the community
PLANNING 1. Selection and analysis of the problem			
2. Statement of problem			
3. Literature review			
4. Research objectives			
5. Research methodology			
6. Work plan			
7. Budget			
8. Plan for project administration and utilization of results			
9. Submission for approval and funding			

Steps in the research process	Role of researchers	Role of health service managers	Role of the community
IMPLEMENTATION 10. Administrative and motivational preparation			
11. Preparation for data collection			
12. Supervision and quality control during data collection			
13. Preliminary analysis of data in the field			
14. Data processing in the field			
15. Cross-tabulations and data summaries			
16. Application of statistics			
17. Preparing reports and recommendations			
18. Presenting reports and recommendations			
19. Utilizing research findings for health development			
20. Disseminating research reports and findings			

Annex 4.1. Steps in the research process for HSR: roles of researchers, managers, and the community[7]

PLANNING THE RESEARCH

Components of protocol	Roles of researchers, managers, and the community
1. Title	
Should be brief but sufficiently descriptive.	Make a **joint decision**. It is useful to defer the decision until the objectives and scope have been clarified.
2. Background	
Brief description of the problem and its importance.	Have **joint discussion** session to determine: • **What type** of information will assist managers or community leaders in making decisions regarding the problem. For example: - cause of the problem; - factors contributing to the problem; - relative importance of various factors; and - comparative effectiveness of various solutions. • Can existing statistics be analyzed to provide the necessary information? • Can research provide the type of information the manager or the community needs? • How will managers or the community use the information when they receive it? (i.e., What actions will they be able to take based on the results?)

[7] Adapted from Pathmanathan, I. 1985. The HSR process. In *Report on the national workshop on the integration of health systems research and management*, February 1985, Malaysia. Ministry of Health, Kuala Lumpur, Malaysia.

PLANNING THE RESEARCH (continued)

Components of protocol	Roles of researchers, managers, and the community
3. Literature review	
Summary of published and unpublished information relevant to: • Understanding the problem; and • Methods of investigating or resolving the problem.	**Researchers** to search for and review literature, documents, and files, and to discuss in depth with people who have first hand experience of the problem. **Managers** to search for related circulars, guidelines, minutes of meeting, reports of conferences, etc., and make available to researchers. **Community decision-makers** to indicate what information on the problem can be gathered from knowledgeable groups and individuals in the local area.
4. Objectives	
Statement of the objectives or aims of the research, (i.e., what information will be obtained and how it will be used).	**Joint description** by researchers, managers, and community decision-makers when appropriate.
5. Approach	
Scope (how much to include within the research project. For example: • the number and type of problems; • the number of categories of populations/services; and • the number of months/years to be studied.	**Joint decision** by managers and researchers based on: • Availability of resources; • Feasibility of collecting valid data; • Nature of the problem being studied; and • Urgency with which results are needed. **Community decision-makers** to participate in discussions if research focuses on problems of importance to the community.
Research design Selection of study type and development of the research design.	**Researchers** to decide, based on the nature of the problem, objectives of research, the type of information required, and the resources available. Managers and community decision-makers to review for feasibility and ethical considerations.

PLANNING THE RESEARCH (continued)

Components of protocol	Roles of researchers, managers, and the community
Methodology for data collection • Types and characteristics of data to be collected (e.g., sociodemographic data, health status, knowledge, opinion types, cost of health resources or interventions). • Methods of data collection and instruments (e.g., interview, review of records or cards, observation of behaviour).	**Researchers** to decide after discussion with managers and, where relevant, community members concerning: • Objectives and design of the research project; • Expected outcomes of the research; and • Operational feasibility of various methods of data collection.
Data processing (i.e., compilation of the data into tables manually or by computer).	**Researchers** to determine method and cost. **Managers** and **community leaders** to assist researchers (if necessary) to contact relevant resources and make administrative arrangements.
6. Budget • Personnel and allowances (e.g., for meals and lodging during field visits). • Equipment and materials (e.g., vehicles, calculators, office supplies). • Data processing costs.	**Researchers** to work out details. **Managers** to: • Review budget to determine whether it is possible to absorb costs through internal adjustments and temporary redeployment of resources. • If costs cannot all be absorbed, to consider with researchers whether suitable funding agencies can be approached by either researcher or manager.

IMPLEMENTATION OF HSR PROJECTS

Activities during implementation	Roles of researchers, managers, and the community
1. Review and revision of the protocol in accordance with resources actually allocated to the project.	**Researchers** to review and discuss proposed revisions and their implications with **managers**.
2. Design and pretesting of instruments and methodology.	**Researchers** to pretest with input from computer programmer or statistician (if necessary).
3. Selection of sample.	**Researchers** to select with guidance from statistician (if necessary).
4. Preparation of manual for data collection.	**Researchers** to prepare the manual.
5. Design of tables for compiling data.	**Researchers** to prepare in consultation with data processing personnel.
6. Training of interviewers and data collectors.	**Managers** to make resources available in accordance with approved project plan including, for example: • Manpower for data collection/interviewing; • Training facilities; and • Support for training costs. **Researchers** to do training. **Community members and health service personnel** to serve, when appropriate, as data collectors.
7. Preparation of data collection areas.	**Managers** to make the necessary administrative arrangements including, for example: • Sending information circulars to staff; • Disseminating information to public/patients; • Providing physical facilities for data collection, interviewing, storage, etc.; • Making transport arrangements; and • Reallocating duty rosters to facilitate temporary assignments for staff.

IMPLEMENTATION OF HSR PROJECTS (continued)

Activities during implementation	Roles of researchers, managers, and the community
7. Preparation of data collection areas (continued).	**Community leaders or representatives** to make arrangements for: • Data collection in the community; and • Notification of other community authorities. **Researchers** to liaise with managers regarding specific requirements of the project.
8. Collection of data.	**Researchers** to monitor and supervise data collection and identify and resolve operational problems. **Managers** to help solve operational problems and provide administrative authority and support for the data collection process, for example, by providing access to records, boosting morale and providing transport and, if appropriate, staff for the data-collection process. **Community decision-makers** to identify community volunteers or workers to collect data when appropriate.
9. Checking and editing completed formats.	**Researchers** to organize and supervise logistics. **Managers and community** to provide manpower and physical facilities.
10. Data processing.	**Researchers** to liaise with data processing personnel.
11. Analysis of data and preparation of draft report.	**Researchers** to analyze data, derive conclusions pertinent to the objectives of the project, and prepare draft report.
12. Discussion of draft report.	**Researchers, managers,** and **community decision-makers** to discuss draft report to consider validity and relevance of findings and recommendations.
13. Final report.	**Researchers** to prepare and present report to relevant authorities and communities.

IMPLEMENTATION OF HSR PROJECTS (continued)

Activities during implementation	Roles of researchers, managers, and the community
14. Policy decisions concerning follow-up action.	**Managers and community decision-makers** who are in the relevant positions of authority to decide on follow-up action based on: • Validity and relevance of report, • Priority of problem and recommendations, and • Feasibility of follow-up action. **Researchers** to provide clarification on validity and relevance (if necessary).

Trainer's Notes

Module 3: THE RESEARCH PROCESS FOR HSR

Pre-workshop reading

The readings below, which relate to this module, should have been completed prior to the workshop. If they weren't distributed or some participants have not read them, make sure that they are available and remind participants to read them before the start of this session.

- Module 9: Study types, from Volume 2 of this HSR training series.
- Taylor, C.E. 1984. The choice of methods. In *The uses of health systems research*. WHO, Geneva, Switzerland. Public health papers no. 78. Chapter 2, pp. 22–41.
- World Health Organization. 1988. *Health systems research in action*. WHO, Geneva, Switzerland. pp. 12–15.

Rationale and approach for this module

Some participants will be experienced researchers who are very familiar with the research process; others will be health services managers to whom this topic is unfamiliar. The module facilitator will have to be innovative in adapting the education approach to maintain the interest of the former group without allowing the latter group to feel that the module is irrelevant or incomprehensible. Strategies that could be used include encouraging self-learning by asking the participants to study the reading materials and handouts before the session; encouraging exchange of knowledge in the small group session; and focusing the emphasis in discussions on the complementary roles of researchers and managers so that each understands the potential contribution and limitations of the other.

The facilitator's style of presentation and interaction during the lecture/discussion period should encourage active contribution and participation. Care should be taken to show appreciation for the contributions of participants from both research and management backgrounds.

Group exercise: Role of researchers, managers, and the community in the research process

Handout 3.3 gives a sample response to the group exercise. This could be added to or modified, based on the input of the participants. It is important to stress the importance of community participation in the research process, as well as the roles of researchers and managers, as meaningful community involvement in research may be a new concept for some of the participants.

Facilitators for the group discussions should encourage group members to share their personal experiences (both positive and negative) on interactions among researchers, managers, and the community during the research process.

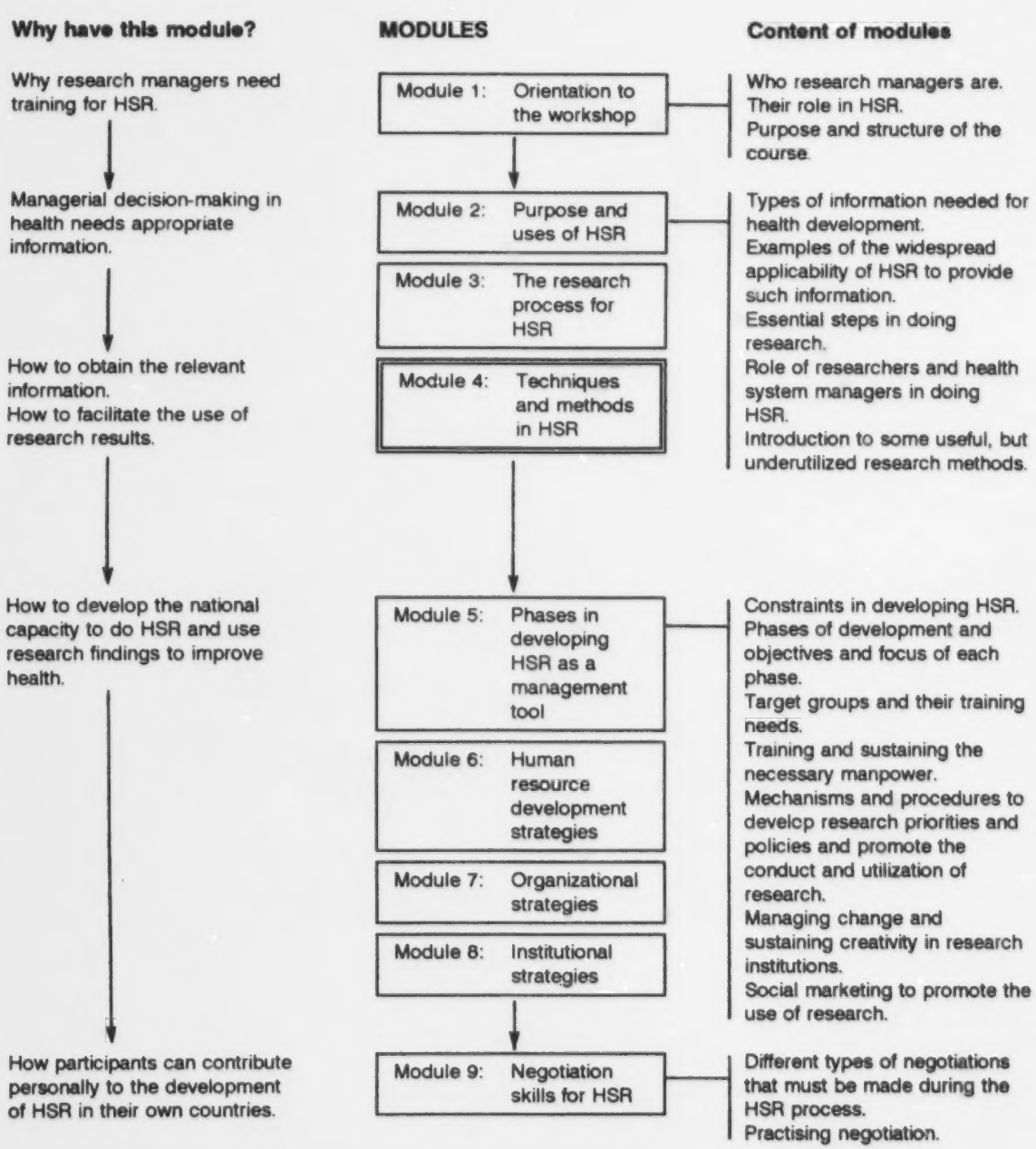
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 4:

TECHNIQUES AND METHODS TO FACILITATE THE RESEARCH PROCESS IN HSR

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 4: TECHNIQUES AND METHODS TO FACILITATE THE RESEARCH PROCESS IN HSR

OBJECTIVES

At the end of this session, you should be able to:

1. Describe and use selected techniques from the behavioural sciences (nominal group technique, delphi technique, and focus group discussion).
2. Recognize the uses of these techniques in supporting the research process in HSR.
3. Recognize the potential uses and limitations of a variety of other data-collection methods from the behavioural sciences that are particularly applicable to HSR.

CONTENTS

Reading assignment for participants prior to presentation of the module:

- Modules 10A through D, Data-collection techniques, from Volume 2 of this HSR training series (optional);
- Handout 4.2 from this module.

Techniques to facilitate the research process (lecture/discussion)

Exercise: The nominal group technique

Data-collection techniques in HSR — The application of some less-common but useful techniques and approaches (discussion)

MATERIALS

Handout 4.1: Guidelines for using the nominal group technique (to be handed out before the exercise)

Handout 4.2: Introduction to data-collection techniques and approaches applicable in HSR: Examples from the behavioural sciences (to be handed out at least 24 hours before presentation of the module)

Trainer's notes

TECHNIQUES TO FACILITATE THE RESEARCH PROCESS (lecture/discussion)

The unique characteristics of the research process in HSR require that researchers, health service managers, and even community leaders work together at various stages of the research process as illustrated in Module 3. Several techniques are available to help facilitate such interaction so that the objectives at these various stages in the research process can be achieved. These techniques have been used for some time in behavioural science research. They are now being increasingly used for a variety of purposes in HSR.

The techniques that will be discussed in this session are:

- the nominal group technique,
- the delphi technique, and
- the focus group discussion.

Nominal group technique

The nominal group technique (NGT) is a group discussion technique that is useful when one wants to obtain a consensus on a topic where decision-making can be usefully guided by the perceptions and opinions of the various group members. The sequence of the group discussion usually is as follows: individual expression followed by "voting," followed by further discussion, and another round of discussion, "voting," etc. The group discussion comes to an end when the results of the last vote are not appreciably different from the last-but-one vote. The steps in the implementation of the NGT are described in Handout 4.1.

Advantages of NGT

- The discussion process is strictly separated from the voting process, and voting is done anonymously. This depersonalizes the process and gives each member an equal vote, regardless of his or her verbal capacity.

- The results thus reflect input from all members of the group. The series of discussions and anonymous votes helps to minimize the chance that the results will be skewed toward the opinions of one or more dominant personalities.

- It provides a useful means of aggregating individual judgements.

Examples of the uses of NGT in health systems research

The NGT (or a modified version of the NGT) is particularly useful during the research process in HSR for:

- Assisting a group of managers/researchers/community representatives in generating and prioritizing lists of topics for which research information may be needed;

- Assisting a group in choosing among alternative research topics; or

- Providing input from a group of "experts" on one or more issues being explored during research.

It could also be used to assist a group of policymakers in reaching consensus regarding research priorities or in selecting specific topics on which research will be commissioned.

The delphi technique

The delphi technique and the nominal group technique have the same objective: both are used in situations where a group has to reach consensus over an issue that is highly value-loaded. The major difference is that in the delphi technique groups do not (usually) meet for discussion, they communicate by means of questionnaires. Each time a questionnaire circulates, the range of permissible answers is narrowed toward the average of the answers in the previous questionnaire. Because of the nature of the technique, there must be ample time and participants must have good written communication skills.

Focus group discussion

A focus group discussion (FGD) is a small-group, in-depth discussion, guided by a facilitator. Usually the group involves 8–10 participants. The techniques for conducting focus group discussions are described in Module 10C in Volume 2 of this HSR training series.

Advantages of focus groups

- This technique is useful for exploring, in depth, the perceptions, beliefs, attitudes, or ideas of a selected group of people.
- It enables members of the group to interact on a specific topic of discussion and stimulate each other, expressing attitudes and thoughts freely without being constrained by status relationships.
- The FGD can stimulate new ideas, providing new insights into difficult problems.
- Participants can assist, as well, with the interpretation of both quantitative and qualitative results.

Disadvantages

- The role of facilitator is pivotal. FGDs may fail if the facilitator does not have sufficient experience or the right characteristics for facilitating a particular group.
- The environment in which the FGD takes place must be carefully prepared and maintained during the discussion. This is difficult in many situations and the source of many inconsistencies and inaccuracies in FGD results. Participants may not feel at ease or may be constantly distracted. The importance of controlling the environment cannot be overemphasized.

The focus group discussion is a useful technique for obtaining the active participation and input of a variety of persons during the research process. It can be used to help define a variable or to develop a research instrument. For example:

- During a research project to evaluate the system of referrals between primary care centres and hospitals in Malaysia, one of the variables under study was the adequacy of the information that accompanied the patient who was referred. To determine what referral information should be considered adequate, a series of FGDs was conducted among hospital staff and primary health care personnel. The FGDs were used to help develop the list of "essential information" and the criteria for determining adequacy.

- In Thailand, a research team wished to determine the appropriate wording for a questionnaire to be used among rural mothers to explore diarrhea in infancy. A series of FGDs among groups of rural mothers showed that the term "diarrhea" was only used for children above the age of 12 months; below that age, diarrhea was considered part of the growing-up process. To elicit information on episodes of diarrhea among children under 1 year in age, the questionnaire had to be appropriately modified.

(Participants and facilitators should be asked to give other examples to illustrate the use of focus group discussions, the nominal group technique, and the delphi technique in HSR.)

EXERCISE: The nominal group technique

1. Arrange participants in small groups and distribute Handout 4.1. Guidelines for using the nominal group technique.

2. Ask each group to use the nominal group technique to develop criteria to be used in recruiting researchers for one of the following situations. (Let each group decide which situation to work on.)

Situation no. 1

An HSR unit is being established in a health institute that, until now, has been involved in training health personnel and conducting epidemiological research. The country is very short of experienced researchers. An experienced epidemiologist will be head of the new unit. There are funds for recruiting three additional researchers for this unit who will be expected to conduct HSR studies and support the development of HSR within the country. Develop criteria for selecting the researchers.

Situation no. 2

A university that has faculties of medicine, sociology, and economics and a school of public health has recently established the post of professor in HSR in an effort to reorient the research efforts of the university to the priority health needs of the country. Develop criteria for the selection of the candidate who will be given this new post.

DATA-COLLECTION TECHNIQUES IN HSR — THE APPLICATION OF SOME LESS-COMMON BUT USEFUL TECHNIQUES AND APPROACHES (optional discussion)

This session can be conducted as a large group discussion chaired by the module facilitator. It is an optional session that can be held for those who are interested. The content should be adjusted to the level of the participants. (See Trainer's Notes at the end of the module.)

Handout 4.2 can be distributed for review before the discussion session and the participants asked to come prepared with examples of how they or others have used one or more of the techniques that will be reviewed.

Introduce each of the following techniques and invite participants and facilitators to share their opinions and experiences in using them, asking them to give examples, in particular, of how the techniques have been used in research:

- Non-participant observation,
- Participant observation,
- Interviews,
- Life histories,
- Scales, and
- Case studies.

Invite participants to discuss the concept of participatory research and its application in HSR. Although participatory research is not a data-collection technique as such, but rather a research approach, it is important to explore with the participants, because of its importance in HSR.

Handout 4.1. Guidelines for using the nominal group technique[1]

Introduction

The group leader explains the topic assigned to the group and displays it clearly written on a flip chart.

Individual nomination of ideas (10 minutes)

Each individual lists his or her own ideas about the topic on a paper. This is done in complete silence to prevent the group from becoming judgemental about the ideas too soon.

Group collation of ideas (25 minutes)

The leader asks that each member read one idea from his or her list, briefly stating why it is important. While the idea is being read, the group's rapporteur should record it rapidly on the flip chart, exactly as worded by the participant. Space should be left below each idea for revisions.

No comments are made by the group at this time, but, as each idea is presented, the rest of the group should study it and see whether they understand what the idea is and why it is important. If clarification is needed, this should be asked for after all ideas are recorded.

Using masking tape, display the flip chart sheets listing the topics on the wall. After 15–20 ideas have been presented, a few minutes should be spent clarifying any ideas that are unclear. No detailed discussions or judgements should be made at this point. To depersonalize each idea, the leader should encourage members of the group other than the person proposing the idea to help clarify it.

Individual priority rating (5 minutes)

Participants individually rate each of the ideas displayed on the flip chart according to its importance, using a scale from 1 (low) to 5 (high). The higher the score, the more important the idea is. Ideas can be given the same score if they are considered by a participant to be of equal importance. Participants may use the "rating sheet" below to record their scores.

---

[1] Adapted from Williamson, J.W., Ostrow, P.C., Baswell, H.R. 1981. *Health accounting for quality assurance*. American Occupational Therapy Association, Bethesda, MD.

Rating sheet

Scale 1 (low) to 5 (high)	Name _____	
Topic	Initial rating	Revised rating
No. 1: No. 2: No. 3: etc.		

Collation of priority ratings (15 minutes)

The group assists the leader and rapporteur to collate the scores on a flip chart using the format shown below ("sheet for collating scores").

Sheet for collating scores

Topic	Rating					Final Score
	1	2	3	4	5	
No. 1: No. 2: No. 3: etc.						

Tally the individuals who gave each rating. Compute the final score by multiplying each rating by the number of people who gave that rating, e.g., (1 x 2) + (2 x 5) + (3 x 4) + (4 x 1) = 28.

Example:

Topic	Rating					Final score
	1	2	3	4	5	
No. 1	//	/////	////	/		28

Discussion and revision of ratings (45 minutes)

The purpose of the discussion is to try to arrive at a consensus. The group leader selects certain ideas and invites discussion to analyze the advantages and disadvantages of using each of them. The group leader may wish to select two types of ideas for review: those with high votes and those with divergent votes (i.e., very high and very low ratings). A few new ideas may come out of this discussion and, if so, initial ratings should be made for these ideas before a full discussion. In addition, a few "sleeper" ideas may be identified among those given low votes. Sometimes such ideas may get a high vote when group members understand why the participant suggested the idea.

After the discussion, members use their original format to make final ratings, using the "revised rating" column.

Revised scoring and prioritization (15 minutes)

The revised ratings are recorded in a different colour on the same flip chart as the initial ratings and collated in a similar manner. The final group score for each of the topics gives an indication of the importance of the idea as perceived by the group.

Handout 4.2. Introduction to some data-collection techniques and approaches applicable in HSR: Examples from the behavioural sciences

Overview

Module 2 demonstrated that the nature of the problems that are chosen for HSR is such that research techniques from several different research disciplines may be needed to provide appropriate information. Some of these techniques, in particular several that are useful in facilitating the research process itself, were explored earlier in this module. These, as well as other techniques from behavioural sciences, are more and more frequently used in HSR to collect data.

Research managers who may not be very familiar with the behavioural sciences will be increasingly called upon to critique, evaluate, or support HSR projects that use data-collection techniques that are derived from the behavioural sciences.

This handout provides an "introductory road map" for research managers who, as they become more involved in HSR, may need to recognize the potential for the use of these techniques along with those of epidemiology, economics, etc.

It is very likely that you will have had personal experience in using some of the research techniques that are discussed in this handout, or at least know of others who have used them. As you read the handout, think of examples that illustrate the use of one or more of the techniques that you can contribute to the discussion.

Types of data-collection techniques in HSR

Data-collection techniques in HSR may be categorized as:

- Collecting data from documented sources (e.g., existing statistics, medical records, financial records, circulars, minutes of meetings, etc.);
- Observing human behaviour or physical conditions, while participating or simply observing;
- Asking questions (i.e., interviewing individuals or groups); and
- Obtaining information through written media (e.g., administering written questionnaires, scales, etc.).

Because the focus of this module is on data-collection techniques from behavioural sciences, the discussion will focus on observing and asking questions, which are two techniques that have been intensively developed by that field. These techniques range from qualitative to quantitative (Table 4.1).

When using quantitative techniques, the type and content of data to be analyzed are more predictable (because they are already defined by the researcher) than when using qualitative techniques.

Non-participant observation

A researcher engaged in non-participant observation simply observes people, recording what he or she sees without interfering in any way in the activities people are involved in. No questions are asked and thus there is no chance to directly inquire about attitudes or perceptions. The researcher may try to be as unobtrusive as possible. Sometimes this type of research is called a "shadow study."

Table 4.1. Overview of data-collection techniques.

Qualitative ⟷ Quantitative		
Observation	Interview	Questionnaire
Non-participant	Unstructured	
Participant	Structured	
	Open-ended	Closed
	Life histories	
	Case studies	
	Test batteries	
	Scales	
	Measuring instruments	

Example:
Observing what contact various types of villagers have with various sources of water, as part of a study to assist a program of schistosomiasis control devise new strategies.

Participant observation

Participant observation can be characterized by moderate, active, or total participation, depending on the degree of involvement. The participant observer not only observes the behaviour of others, he or she also takes part in the activities and hence observes him- or herself. The researcher may also ask questions to obtain additional information on the attitudes and perceptions of those involved in particular situations. When doing participant observation, the researcher often lives in a given community and tries to be "on hand" when significant events occur; collecting information by observing and possibly inquiring then or later about what is happening. Participant observation, it is always said, is time consuming, but it need not necessarily be so. This technique has always been associated with the ethnography of entire cultures, but if the technique is used to focus on specific questions, it can yield results in a short time.

Examples:
Researchers studying DDT insecticide spraying for malaria control in a rural area of Thailand[2] were faced with a variety of problems associated with the acceptance of spraying by the villagers, including the puzzling fact that the results of the work of individual spray teams (as measured by variations of DDT deposits) was highly erratic. On some occasions the results were entirely satisfactory, while on other occasions they were not. A research assistant was assigned to each of two spray teams, his role unknown to the other members of the team. Both were trained in spray techniques and worked like the other team members. After only 6 days of observation and no lengthy data analysis, they were able to clearly determine why the work of the spray team was so erratic. The basic problem was that teams were assigned a specific amount of DDT powder, which they had to use by the end of the day. The powder was heavy, the sun hot, and it was obviously rewarding to get rid of the powder as rapidly as possible. Consequently villages sprayed in the morning received a higher concentration of spray than villages sprayed during the afternoon. Sometimes powder was simply thrown away or traded to villages for food.

Other examples of health-related issues that can be studied through participant observation include diet, access to food, cash flow, relations within families, water storage and use, disposal of human and household waste, beliefs about health and illnesses, and health practices.

Interviews

There are two basic variables that help define the types of interviewing techniques that may be used in HSR: the nature of the instrument used; and the category of respondent/informant.

The interview instrument

One can distinguish unstructured interviews from structured interviews where use is made of a questionnaire form. In the unstructured interview, the researcher has a topic in mind but no list of questions; the topic is introduced and the informant encouraged to talk freely. These questions are termed open-ended. During participant observation the researcher may conduct one or more unstructured interviews. In the structured interview, the questions and their sequence are predetermined. Questions may be either open-ended or closed, but most will be of the latter type. KAP-studies (knowledge, attitudes, and practices) are usually structured, with relatively large numbers of respondents asked the same set of questions.

Respondents

An entire population can be interviewed (for instance, all pregnant women in a certain village) or just a sample of them. The sample may be a probability sample (which is expected to be representative), or a non-probability sample. In the latter type of sample, the researcher may select informants because of the characteristics he or she already knows they have (selecting, for example, only "typical" cases or those that appear to be at opposite extremes). On the other hand, respondents may simply be selected because they are easily available for interviewing. In some studies, only a few key informants may be interviewed or a few respondents chosen for detailed case studies.

---

[2] Tavitong, H., Prasit, L., Mance, S. 1981. Medical social science program, Faculty of Social Sciences and Humanities, Mahidol University, Bangkok, Thailand.

Life histories

A special application of the interview technique is the life history. This technique fits well with communication patterns in rural traditional societies. Life histories are usually collected for a very limited sample. They allow people to tell stories about important aspects of their lives, giving the interviewer insight into what they believe is important. Respondents may be asked to focus on their entire "history" or just selected aspects of it.

Examples:
Topics that may be quite successfully explored through the life-history approach include, for example, patterns of reproduction or women's feelings about marriage, childbirth, and contraception.

Scales

Scales and test batteries are highly structured interviews. The sequence of the questions is set and highly standardized. It is often argued that, because of validity problems, these questionnaires are less useful in semi-illiterate, rural settings in developing countries. Scales are a tempting instrument for researchers exploring health behaviour, but should be developed only by researchers who are experienced in their constructions and know how to address the problems of validity and reliability that arise. Provided that both problems are solved, scales can be used in descriptive studies. Scales have been invented to measure complex concepts such as health, depression, neuroticism, fear, intelligence, etc. They are mostly used by psychologists and psychiatrists for diagnostic purposes. Some researchers have used scales within population surveys in an effort to describe and "diagnose" various community groups.

Examples:
Well-known scales used in psychiatric epidemiology include the GHQ (General Health Questionnaire), the PSE (Present State Examination), the SPI (Standard Psychiatric Interview), and the SRQ (Self-Reporting Questionnaire).

Case studies

Case studies involve detailed investigations of a few people, a community, or a particular situation. Usually a number of methods for collecting information are used simultaneously. The subjects of the study are often chosen using non-probability sampling. For example, the cases may be selected in such a way that they are typical or illustrative of a particular phenomenon or group.

The units of study are few. In a community study, for instance, one or a few communities may be studied. Case studies use a variety of methods at the same time (e.g., observation, in-depth interviews with key-informants, analysis of existing records).

Example: A case study of the functioning of personnel in a selected health centre
Data can be collected through observation (e.g., observing what various staff members do, how they function in relation to other aspects of the health centre), interviews with staff members (e.g., exploring their actual functions, preferred functions, feelings about centre management), reviewing records, and interviewing patients.

Participatory research

The explicit idea in classical research is that somebody researches and someone else is researched. The idea that someone researches him- or herself is quite uncommon. A district medical officer may investigate the needs of his area, but this is not what is meant by participatory research.

In participatory research, the boundaries between research and health programs are blurred. Through the implementation of the research, it is expected that conditions influencing the health system will change. An essential aspect of participatory research is that all phases of the research (from setting the objectives to using the results) are planned and conducted by the researchers and target population together. The results of participatory research should be useful to those who participated in the research.

Example: Community diagnosis. Participatory research as a first step toward community involvement in primary health care[3]

A good **example** of participatory research is a project that was organized in two rural regions of Kanetaka, India, in which community members were involved in a "community diagnosis" as a step toward developing a primary health care program and promoting the community's involvement in it. The research team argued that the best way to conduct a community diagnosis was "with the people and for the people." Research, they charged, had been often misused by project managers to collect information only on issues of importance to themselves and designed in a way that would yield results that would support their interests.

The project consisted of two 5-month participatory research exercises that focused on setting up a steering group of interested people in the villages, training lay people in methods of health behaviour research so they could become "paraprofessional workers," conducting a community diagnosis, and finally exploring and developing innovative approaches to health education.

The research team conducted their activities in the following manner:

1. Community diagnosis teams of six to ten local investigators were chosen in each region.
2. Representative samples were selected in each of the two study areas: 200 households in North and 82 in South Karnataka.
3. After mapping the social landscape, a stratified sample was selected, consisting of a certain number of remote villages, roadside villages, and small crossroads towns.
4. Initial participant observation was undertaken by sitting in the shops, clinics, and verandas of a variety of practitioners to whom local people voiced their health concerns.
5. Dialogues with a few key-informants generated the beginning of a list of food-related health concerns.

---

[3] Nichter, M. 1984. Project community diagnosis: participatory research as a first step toward community involvement in primary health care. *Social Science and Medicine*, 19(3), 237–252.

6. Guided interviews were used to explore the perceptions of members of the households sampled concerning local primary health care staff.

Based on the results, the researchers and community members involved were able to explore and develop approaches to health education. The research process itself enhanced community involvement in the development of an active primary health care and health education program.

Trainer's Notes

Module 4: TECHNIQUES AND METHODS TO FACILITATE THE RESEARCH PROCESS IN HSR

Preparatory reading assignment for participants

You may wish to ask participants to read Modules 10A through D in Volume 2 of this HSR training series, Module 4 (this module), or both in preparation for the session.

Approach to the module

This module contains a considerable amount of information. The selection of educational approaches that are most appropriate for the participants is of particular importance, to ensure that the information does not overwhelm them.

It is very likely that there will be some participants who have personal experience in using the research techniques that are discussed in the module. Participants can be asked to review Handout 4.2 from the module before the session and come prepared with examples to illustrate one or more of the techniques described there. The examples can be discussed either in large or small group sessions. The facilitator should be prepared to add to the illustrative examples that are provided in the handout.

Do **not** attempt to be encyclopedic in presenting the module. Adjust the content according to the time available and the interest level of the participants. It may even be necessary to arrange the module in such a way that the discussion on "Data-collection techniques in HSR" becomes an optional session available to those who are interested.

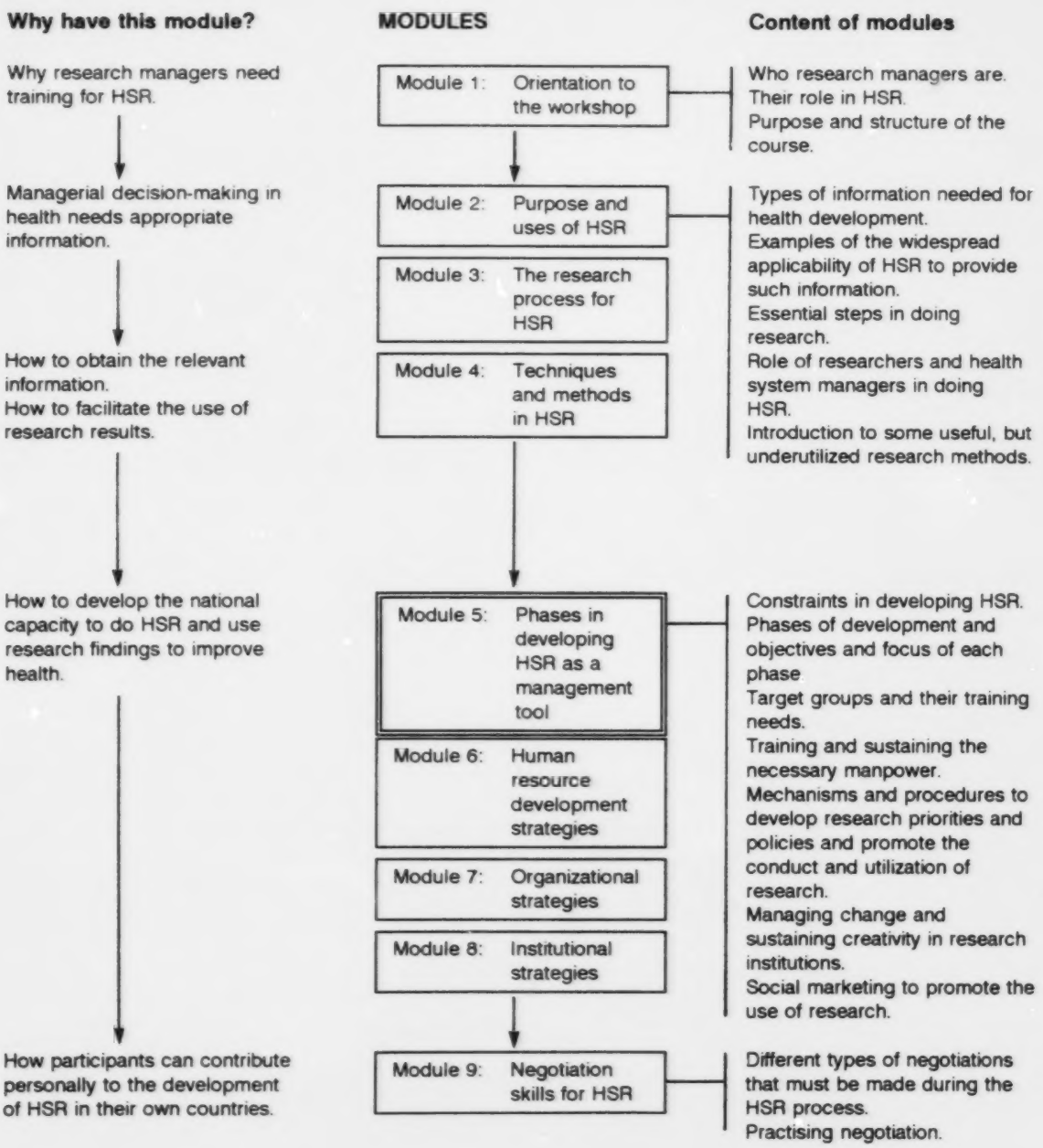
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 5:

PHASES IN DEVELOPING HSR AS A MANAGEMENT TOOL

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 5: PHASES IN DEVELOPING HSR AS A MANAGEMENT TOOL

OBJECTIVES

At the end of this session, you should be able to:

1. **Analyze constraints in developing HSR and outline a framework of strategies to deal with these constraints.**
2. **Describe the phases in developing HSR within a country.**

CONTENTS

Reading assignment for participants prior to the presentation of the module:

- World Health Organization, 1990. *Health systems research*. Background document for the technical discussion at the World Health Assembly on the role of health research in the strategy for health for all by the year 2000. WHO, Geneva, Switzerland. A43/technical discussion/3.
- Commission on Health Research for Development, 1990. *Health research: essential link to equity in development*. Oxford University Press, New York. Executive summary, pp. xvii-xix.

Lecture/discussion

Group exercise: Analysis of country situations with respect to development of HSR

Plenary session: Discussion of the exercise

Exercise: Development of individual plans of action

MATERIALS

Handout 5.1: Guidelines for the group exercise: Analysis of country situations with respect to development of HSR (to be handed out before the exercise)

Handout 5.2: Prime movers: examples (to be handed out at the end of the module)

Handout 5.3: Guidelines for developing individual plans of action

Trainer's notes

LECTURE/DISCUSSION

Introduction

This module is intended to provide practical guidance to countries that are attempting to develop the capacity for HSR and to institutionalize it within their own health system with the ultimate goal of using it routinely at all levels of management to provide information to support decision-making.

Conceptually, health systems research (HSR) can be regarded as a tool to support managerial decision-making.[1] It should provide information to assist managers in the health system to make more rational decisions. That is, it should supplement information that is routinely available through the health information system and other related information systems.

In practice, however, HSR is not used as widely or as effectively as it should be to improve the health of the community.[2] To achieve this, it is necessary to analyze the existing situation in the country, to develop and implement appropriate strategies for improvement, and to monitor progress so that strategies can be revised according to need. This module provides a framework for such analysis and monitoring and suggests appropriate strategies for improvement.

The existing situation

Decision-making and managers

The health care manager must make decisions that involve:[3]

- Analyzing health and related problems in the community;
- Developing an appropriate infrastructure for health care;
- Adopting appropriate health technology; and
- Monitoring and evaluating the outcome of health care and its impact on the health of the community.

All these decisions are made in the sociocultural, political, and economic environment of the health care system in which he or she functions.

---

[1] World Health Organization, 1983. *Research for the reorientation of national health systems*. Report of a WHO study group. WHO, Geneva, Switzerland. Technical report series 694.

[2] Commission on Health Research for Development, 1990. *Health research: essential link to equity in development*. Oxford University Press, New York, NY.

[3] World Health Organization, 1986. *Improving health care through decision-linked research*. WHO, Geneva, Switzerland. HMO/86.4.1.

The milieu in which health service managers work

In most countries, policymakers are extremely busy people who seldom read international or local research journals. It has usually been 15–20 years since their last exposure to academic and scientific jargon and they feel that research tells them about problems they know exist, but does not tell them what to do about them. Their common modus operandi is to arrive at decisions based on sociopolitical pressures or "professional intuition."[4]

Mid-level managers are also very busy. They are involved in crisis management, i.e., daily "fire fighting," and view systematic decision-making processes as a "luxury" to be indulged in "when they have the time." They too seldom read journals or research reports.

Health personnel are of two broad categories. In larger, more urban institutions, they are overworked and understaffed and involved in a daily struggle to see all the required patients, complete laboratory tests, papers, etc. In rural, fairly remote situations they are bored with repetitive, routine jobs.

All of these groups doubt whether HSR has any relevance to them and fear yet another burdensome, meaningless task.

The academic environment

In most countries, researchers work in universities or research institutions and seldom have the opportunity to interact with health managers. Therefore, they have little chance to understand the issues that concern managers or to explain their research findings to them. They are very concerned with the scientific standard of their research, but little concerned about its societal and managerial relevance. They produce papers, primarily for publication in journals, that bring recognition, prestige, and promotion. They are seldom concerned with the application of their research findings. There is no recognition, prestige, or promotion attached to "research utilization," which is regarded as entirely the responsibility of the managers.

Need for change

For research to be translated from the academic stratosphere to the daily life of managers in the health system, CHANGE must occur

- Among **managers** in the health system,
- Among **researchers** in health and health-related fields,
- Within the relevant **organizational structures and processes** in the country.[5]

---

[4] Ilsley, R. 1986. *Present status and future development of health systems research*. A working document prepared for the Health Systems Research Advisory Group, World Health Organization, Report of the First Meeting. WHO, Geneva, Switzerland. HSR/86.1

[5] World Health Organization, 1988. *Health Systems Research Advisory Group second meeting, Gaberone, Botswana, June 1988*. WHO, Geneva, Switzerland. WHO/HSR/88.2.

Among managers

Policymakers and mid-level managers must accept that HSR is not merely an academic exercise, but can provide information to assist in decision-making. They must acquire competence to identify situations where HSR can be of assistance. (Sometimes there is already enough information, but managers postpone decision-making by asking for more. At other times it is obvious that socioeconomic-political realities will preempt the use of research information in decision-making.) Policymakers and managers must analyze problems systematically to determine the appropriate research questions that will be topics of research and be prepared to support the research process. Finally, they should be able to assess research findings and incorporate them in decision-making.

Health service delivery personnel must acquire competence in analyzing problems from a systems perspective, be able to collect and analyze information in a relevant, appropriate and scientific manner, and draw appropriate conclusions. They should also be able to implement decisions based on research findings.

Among researchers

Researchers in health and health-related fields must accept the concept that research should support health development and should be familiar with the relevant issues of concern. They need the skills to analyze problems from a health systems perspective and present their findings accordingly. It is important to recognize the multidisciplinary nature of HSR and acquire the competence to work in multidisciplinary teams (i.e., understand the methods, terminology, strengths, and limitations of relevant disciplines). They should be able to communicate findings in a clear fashion, devoid of jargon that is unlikely to be understood by managers.

Within organizations

Organizational change is even more difficult than changing the behaviour of individuals. Mechanisms are needed to ensure that managers and researchers will interact regularly and communicate effectively. This is essential to ensure that research provides information relevant to national health concerns and that this information is used to solve priority problems. Change is also required to ensure that funds for research are allocated in accordance with national priorities. Both research and training institutions will need to reorient their programs and forge new linkages. As manpower policies are developed, they will need to address not only how to train the relevant research personnel, but how to retain them and sustain their interest and creativity.

Developmental phases in institutionalizing HSR

To achieve the desired changes, a series of overlapping and, to some extent, sequential development phases are necessary. The phases are:[6]

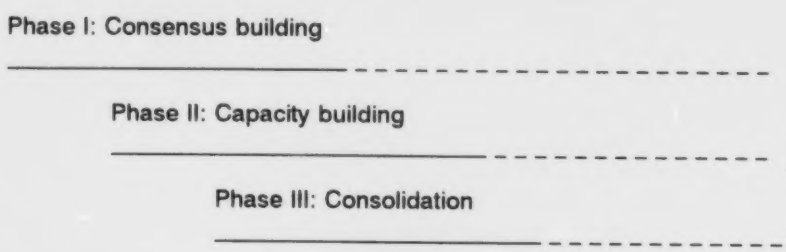
---

[6] Pathmanathan, I. 1987. *Milestones in institutionalizing health systems research in the management process*. Presented at Workshop on health systems research as a management tool, Kuala Lumpur, Malaysia, December 1987. Regional Office for the Western Pacific, WHO, Manila, Philippines.

- Consensus building, aimed at creating a suitable climate for HSR;
- Capacity building, aimed at developing and sustaining a pool of appropriate research and managerial skills in the country; and
- Consolidation, with an emphasis on creating viable organizational structures and processes to sustain the use of HSR as a management tool.

The developmental phases are illustrated in Figure 5.1.

Figure 5.1. Phases in institutionalizing HSR.



Consensus building

Webster's dictionary defines consensus as "group solidarity in belief and sentiment" or "feeling together." The main thrust during the phase of consensus building is to foster a belief in the usefulness of HSR as a tool to support health development and to create a demand for HSR. This is the initial phase, but it needs to be repeatedly renewed. Strategies during this phase involve initiatives aimed at stimulating recognition of the potential and uses of HSR and "selling" the idea of its utilization as a management tool. Target groups for these initiatives include policymakers and high-level managers in health services, in academic and research institutions, and in funding agencies.

Prime movers

An essential ingredient for success in fostering the development of HSR in a country is active commitment from people who could be described as "prime movers" or champions.[7]

A prime mover is a person who:

- Initiates the process of development; and
- Recognizes opportunities and uses them.

[7] World Health Organization, 1990. *Health systems research*. A background document for the technical discussion, World Health Assembly, May 1990, on the role of health research in the strategy of health for all by the year 2000. WHO, Geneva, Switzerland. A43/technical discussions/3.

Prime movers must:

- Have a **vision** of what is needed; and
- Feel a strong sense of **mission** to achieve it.

In addition to having a strong vision and sense of mission, most prime movers have:

- A high level of technical credibility;
- Power or linkages with the power structure of the system; and
- Wide experience in various sectors in the health system, often having moved from one field to another (e.g., research, teaching, different levels of management in the health system).

Prime movers function by initiating, building up, or strengthening existing structures. They create networks:

- At an informal (personal) level, by recruiting other prime movers and supporters among persons who occupy key positions; and
- At a formal (institutional) level, by recruiting the support and commitment of various organizations.

Prime movers increase the climate of acceptance of HSR by forming partnerships with powerful coalitions. They are able to function in an inhospitable, or even hostile environment. When they encounter a "blank wall," they seek a "crack in the wall" and are flexible enough to modify themselves to the "shape of that crack," so that they are able to proceed.

It is necessary to have prime movers at different levels within the health system. Examples of a prime mover at the policy level and a prime mover at the institutional level are given in Handout 4.1.

Capacity building

During the capacity-building phase, efforts are needed to rapidly develop a critical mass of professionals within the country who have the appropriate managerial and research skills.

Managerial skills

The managerial skills that are required include the use of information in problem solving and skills in program planning and evaluation. Recognizing the problem of staff mobility and the difficulty that trained individuals will have in practising such skills in an inhospitable managerial climate, efforts should be made to create a **critical mass** of trained managers through a **planned program of short courses** that will train management teams rather than individuals.[8] Such teams will be needed at provincial and district levels. Health systems researchers should be involved in this training so that the use of research information in managerial decision-making is integrated into the training. For longer term and more sustained impact, curriculum changes in basic and post-graduate training of all categories of health personnel will be necessary.

---

[8] Pathmanathan, I., Sahan, K. 1988. Health systems research as a management tool in Malaysia. In *Health systems research in action*. WHO, Geneva, Switzerland. WHO/SHS/HSR/88.1.

Initiatives sponsored by agencies, such as WHO, UNFPA, the World Bank, and USAID, are directed at improving management skills at middle and operational levels. The development of HSR should be perceived as complementary to these efforts.

Research skills

The major constraints in the development of research skills in a country can be described as follows:

- **The length of the training period:** The traditional pattern of training for research is a university-based, highly specialized period of study that progresses on a "trial and error" basis toward a doctorate. Such training does not follow a systematically designed curriculum. There are few specifically designed research courses. In most places, the "learning by doing" philosophy entails a long period of apprenticeship. Therefore, the training period is usually quite lengthy.

- **Production of only a small number of highly specialized researchers:** Researchers tend to be highly specialized in a single discipline and are very familiar with the jargon and approaches of their own discipline, but they know little about related disciplines. Thus, it is difficult for them to work in multidisciplinary teams.

- **The limited nature of career structures**:[9] In most countries, career structures for health researchers outside of the academic institutions are limited or nonexistent. There is little or no incentive for personnel in the health services to devote time or energy to research.

Research manpower needs

As described in Module 2, relatively simple research can fulfill information needs at the operational level while the higher levels require more complex research (Table 5.1).[10]

Table 5.1. Research at various management levels.

	Complexity of decision	Complexity of research	Type of researcher
Policy level	+++	+++	Multidisciplinary team of experienced researchers
Program management	++	++	Mixture of experienced researchers and beginners
Operational level	+	+	Health service personnel

[9] World Health Organization, 1987. *Promotion of research career structures in developing countries*. WHO, Geneva, Switzerland. WHO/RPD/CAR/87.

[10] Illsley, R. 1988. *Health systems research in action*. WHO, Geneva, Switzerland. Inroduction. WHO/SHS/HSR/88.1.

Based on this analysis, the research manpower needs in a country may be summarized as follows:

Level	Research manpower needs
Lower levels of management	Larger numbers of personnel with fairly simple research skills.
Higher levels of management	Smaller number of researchers with higher, more complex research skills. They should be familiar with the concerns of health managers as well as the concepts, approaches, and jargon of sister disciplines.

Strategies

Taking into consideration constraints and research manpower needs, specific manpower development strategies are required for different types of research. It is important to keep five basic principles in mind:

1. **For simpler research, train and use existing health service personnel.**

When training health service personnel to do simple research, consider the following points:[11] [12]

- It is feasible to release such personnel for training for only a short time (2–3 weeks at most);
- Simple research courses, tailored to the entry competence and expected level of function of the personnel, are needed;
- These courses should provide a supervised "learning by doing" experience; and
- Continued supervision and support should be provided by experienced researchers after training is completed.

2. **For more complex research to develop specialized research manpower:**

   - **Reorient existing experienced researchers; and**
   - **Ensure that new young researchers are given relevant training.**

[11] Pathmanathan, I., Sahan, K. 1988. Health systems research as a management tool in Malaysia. In *Health systems research in action*. WHO, Geneva, Switzerland. WHO/SHS/HSR/88.1.

[12] Owuour-Omondi, L. 1988. Improving health planning and management at district health level in Botswana. In *Health systems research in action*. WHO, Geneva, Switzerland. WHO/SHS/HSR/88.1.

In developing specialized research manpower,[13]

- **Immediate strategies** should be aimed at reorienting experienced researchers from relevant disciplines so that they acquire:
  - An awareness of priority concerns in the health system; and
  - The ability to work in multidisciplinary teams.
- **Medium-term strategies** are needed to develop the next generation of researchers. These could include:
  - Training a core of researchers in relevant disciplines in specifically designed courses (1 month to 1 year) in centres of excellence for HSR, and
  - Reorienting university programs to insure that the concepts and approaches of HSR are integrated into existing post-graduate training programs in relevant disciplines.

3. Integrate the concepts of HSR into related initiatives in health development.

Many initiatives such as technology assessment, quality assurance, strengthening of district management, development of health information systems, etc., have objectives and approaches that are similar to those of HSR. Also, in many programs (e.g., the expanded program of immunization (EPI), essential drugs, control of diarrheal diseases, safe motherhood), there is potential for the integration of HSR at a practical level. Every opportunity should be used to integrate the concepts and approaches of HSR in these initiatives to promote the recognition that HSR is not a new discipline but a concept and approach that is applicable within existing initiatives.

4. Develop an "HSR culture."

The basic concepts of HSR should be integrated into the curricula for all health and health-related personnel at basic, post-basic, and advanced levels.

5. Sustain research capability by developing an appropriate career structure that provides relevant incentives and rewards.

The application of these five basic principles will be elaborated in Module 6, which deals with Manpower development strategies.

---

[13] World Health Organization, 1988. *Health Systems Research Advisory Group: second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2

Consolidation

Problems such as fluctuating interest, the waxing and waning of commitment to HSR, overdependence on a few committed individuals, and staff mobility can destroy initial gains in developing HSR in a country. The aim of the consolidation phase is that, with the continued application of the relevant managerial and research skills, research information will be routinely used in management.

During this phase, changes are needed at the "macro" or country level as well as at the "micro" or research institution level.

Constraints at the macro or country level

The constraints to developing an HSR program at the country level may be summarized as follows:[14] [15]

1. In many countries, research policies and priorities are not aligned to national health policies, health plans, or health priorities. In some countries, national health plans or priorities have not yet been identified. There is a low political commitment for this process.

2. Health research is often perceived within ministries of health and research councils as synonymous with "biomedical research." The need to orient research to national health development priorities is not recognized.

3. Communication between researchers and managers is poor, and there is no mechanism for joint identification of research projects or for dissemination and discussion of research findings. The need for research information is often recognized too late for research to provide the information needed for decision-making.

4. Many health programs have research components that conceptually are HSR, but have other labels, thereby causing confusion at the ground level.[16]

Principles in developing macro-level or organizational strategies[17]

1. **Establish a focal point unit to provide leadership.**

---

[14] World Health Organization, 1986. *Health Systems Research Advisory Group: first meeting*. WHO, Geneva, Switzerland. WHO/HSR/86.1.

[15] World Health Organization, 1988. *Health Systems Research Advisory Group: second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2.

[16] White, K.L. 1989. Perspective: on confusing the name with the thing! *Bridge*, 3 (Winter), Invited commentary.

[17] World Health Organization, 1988. *Health Systems Research Advisory Group: second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2.

This unit should spearhead:

- The formulation of health research policies;
- The identification of priorities; and
- The establishment of appropriate organizational linkages.

2. Identify and strengthen lead agencies.

Lead agencies provide the specialized research expertise that is needed to perform research to support policy decisions and also to support national research manpower development strategies.

3. Realign and strengthen mechanisms for funding.

The structure and procedures for funding health research, including HSR, will need to be aligned to the national health research policy and priorities.

4. Establish mechanisms for communication and interaction.

Regular interaction and communication is needed among:

- Researchers and managers;
- Researchers from various disciplines; and
- Different research institutions.

Constraints at the research institution level

Within research institutions, there are several constraints that affect the development of HSR:

1. Research is a creative activity and requires an appropriate supportive environment. Many research institutions do not have such an environment and thus their research productivity is low and the quality of the research produced is poor.

2. Many research institutions have:

   - No stated research policies or policies that are not aligned with national needs;
   - No monitoring procedures or only procedures that monitor the quantity of research produced, ignoring the quality and types of research; and
   - Poor financial monitoring.

3. The introduction of HSR into an existing research/academic institution could:

   - Be viewed as a "threat" or competition to existing disciplines; and
   - Lead to resistance, if the institution has primarily a laboratory or training orientation.

4. The concept of promoting and supporting the utilization of research results is new to most research institutions. Research staff will need to devote part of their time to meetings with managers, members of task forces, etc. Furthermore, they will need to develop the skills to communicate with managers, politicians, the press, and the community.

Principles in developing institutional strategies[18 19 20]

1. Support creativity.

The research manager needs to understand the principles involved and develop the skills that are needed to support creativity.

2. Manage the change process.

The realignment of research policies, the institutional restructuring that may be associated with the introduction of HSR, and the development of mechanisms for monitoring of research, all involve change within the institution. Skillful management of the change process will be essential for success.

3. Apply the principles of social marketing.

The effective use of research findings for health development is at the heart of HSR. The research manager needs to be able to promote the utilization of research findings, which are the "product" of his institution. The application of these principles is elaborated in a later module on institutional strategies.

---

[18] Rothman, J. 1980. *Using research in organizations: a guide for successful application*. Sage Publications, Beverly Hills, California.

[19] Trewatha, R.L., Newport, M.G. 1982. *Management*. Business Publications Inc.

[20] Luthans, F. 1982. *Organizational behaviour*. McGraw-Hill, Singapore.

Conclusion

The development phases for HSR will need to be planned systematically, taking advantage of the existing potential and structures in the country. The strategies may need to be revamped and renewed from time to time. In the initial phase, high profile leadership is a critical ingredient for progress. This must be followed by the rapid building of a **critical mass** of researchers and managers who have integrity, credibility, and persistence, and are able to work well in teams, providing support for each other. Institutionalizing HSR will be a long process, involving patience and persistence along with recognition of opportunities and capitalization on the potential that already exists.

GROUP EXERCISE: Analysis of country situations with respect to development of HSR

Instructions

Pass out Handout 5.1. Organize participants into small discussion groups and ask each group to select a chairperson and rapporteur. The facilitator should serve as a resource person to clarify concepts and the output expected from the session.

Ask the groups to complete the tasks listed in the handout:

1. Before group work starts each group should give its members 15 minutes to review individually the questions suggested in the table in Handout 5.1, Framework for analyzing constraints and potentials for HSR program development.

2. Each participant should then contribute a brief summary of his or her perceptions regarding the constraints and potential in his or her country.

3. During the discussion members of the group should:

   - Analyze the experiences presented to identify the potential for change in their own and other group members' countries, and
   - Determine for what parts of the framework participants have insufficient information.

4. Each group should then prepare for its presentation during the plenary.

   - The framework of the three phases of development, the three levels of management, and the role of prime movers can be used for the presentation by each group. However, innovative approaches should be encouraged.

   - The presentations should not be a series of mini country reports. Instead each group should present an overall summary of their findings.

     Example:
     "In all but one of the countries in Group A, we were able to identify at least one prime mover. However, in general these prime movers were more active in consensus building than in the subsequent phases."

   - Whenever possible, the group should attempt to derive generic conclusions.

     Example:
     "Managers from research institutions had little knowledge of what research activities had been undertaken to support decision-making at the operational level." "Managers from health services were not aware of what types of research were going on in research institutions."

PLENARY SESSION

The module facilitator should chair the session while the other facilitators serve as resource persons to assist in focusing the discussion.

At the beginning of the session, participants should be reminded that they should make notes concerning points to be included on their own plans of action.

Each group should be asked to present its group report.

The discussion should highlight:

- Common constraints faced during various phases of development;
- The potential for change in various country situations; and
- Other "lessons learned" during group work.

EXERCISE: Development of an individual plan of action

During the workshop, participants will continue to:

1. Study and discuss issues and strategies for:

   - The development and utilization of HSR; and
   - The management of research and research-related institutions.

2. Analyze situations in their own countries and institutions to identify strategies that are relevant to their own environments.

The individual plan of action provides an opportunity for each participant to apply this insight and knowledge at a personal level. It is a statement of what the participant intends to do to facilitate or contribute toward promoting or sustaining HSR and its use to improve the health of the community in his or her country.

In every country and institution, there is potential for development as well as numerous limitations. In addition, each participant has strengths as well as weaknesses. Participants should take all of these variables into consideration in preparing their plans of action.

This module provides the framework for developing the plan of action while Modules 6, 7, and 8 offer ideas on strategies that could be useful. Figure 5.1 in Handout 5.3, which can be distributed to the participants, illustrates the relationship of the various modules to the plan of action. The boxes in the column entitled "Process of developing your plan of action" indicate the sequence of steps that should be followed in developing the plan during the workshop.

Handout 5.1. Guidelines for the group exercise: Analysis of country situations with respect to development of HSR

Instructions

Complete the following tasks in your small groups:

1. Before group work starts, each group should give its members 15 minutes to review individually the questions suggested in Table 5.2, Framework for analyzing constraints and potentials for HSR program development.

2. Each participant should then contribute a brief summary of his or her perceptions regarding the constraints and potential in his or her country.

3. During the discussion, members of the group should:

   - Analyze the experiences presented to identify the potential for change in their own and other group members' countries, and
   - Determine for what parts of the framework participants have insufficient information.

4. Each group should then prepare for its presentation during the plenary.

   - The framework of the three phases of development, the three levels of management, and the role of prime movers can be used for the presentation. However, innovative approaches should be encouraged.

   - The presentations should **not** be a series of mini country reports. Instead each group should present an overall summary of its findings.

     Example:
     "In all but one of the countries in Group A, we were able to identify at least one prime mover. However, in general these prime movers were more active in consensus building than in the subsequent phases."

   - Whenever possible, the group should attempt to derive generic conclusions.

     Example:
     "Managers from research institutions had little knowledge of what research activities had been undertaken to support decision-making at the operational level." "Managers from health services were not aware of what types of research were going on in research institutions."

Table 5.2. Framework for analyzing constraints and potentials.

Stage of development of HSR program	Prime movers	Levels of management		
		Policy level	Program management	Operational level
Consensus building	Are there prime movers who initiate activities for each level of management?	Do policymakers - ask for information? - use it in decision making? - support HSR?	Do program managers - ask for information? - use it in decision-making? - support the development of HSR?	Do health service personnel - obtain information to assist in problem-solving?
Capacity building	Do the "HSR activists" have access to power in decision-making related to: - training? - funding? Do they use opportunities?	Are experienced researchers involved in research to support policy decisions? If not, why not?	Are some researchers involved in research to support decision-making for health programing? If not, why not?	Are any health service personnel doing HSR? If not, why not?
Consolidation	Do "HSR activists" build linkages? Influence policy?	Is research linked to health priorities? Is research funding aligned to stated policy? Are available research resources used to: - conduct research on priority problems? - train local researchers for policy or operational levels? Are there any formal mechanisms for researcher-manager interaction?		In existing research institutions: What is the attitude/ involvement with HSR? Is any support given for research at the operational level? Are efforts made to "sell" research results?

Handout 5.2. Prime movers — examples

These examples are taken from real life, one from an Asian and one from an African country. (The initials are fictitious.) They are intended as background reading, to elaborate and provide substance to the concept of prime movers.

Example No. 1: Dr B.F., a prime mover at the national policymaking level

During a 20-year period when HSR developed rapidly in Country X, Dr B.F. was initially the Director of Planning and Development and subsequently the Director General of the Ministry of Health. During this time he:

- Invited a consultant to produce an analytic paper on "How to develop health systems research." This formed a basis for much subsequent action.
- Initiated a few high-profile research projects that he frequently cited and used during policy and planning meetings.
- Identified activists at different levels in the health system and recruited their support for HSR.
- Maneuvered himself into the position of chairman of the Medical Research Council and initiated the development of a national research policy that stressed HSR and the realignment of research funding.
- Got himself elected to the University Council and used that forum to introduce HSR into academic circles.

Example No. 2: Dr A.R., a prime mover at the institutional level

Dr A.R. was appointed head of an HSR Unit that was created within a Medical Research Institute that was largely biomedical in orientation. To activate HSR in a rather inhospitable environment, he:

- Developed a country assessment of HSR needs and potentials with the support of an external consultant.
- Organized a national consultative meeting on HSR which brought together key players (university and Ministry of Health).
- Produced a directory of HSR studies and existing HSR needs by compiling a list of HSR studies undertaken in both university and research settings and an inventory of existing HSR needs as perceived by the Ministry of Health. This directory was subsequently used:
  - as a resource document at monthly meetings between health systems researchers, and
  - as a set of guidelines to support the development of the HSR process at country level.
- Involved himself in research efforts in two districts, where he demonstrated the role of HSR in solving operational problems.
- Initiated discussion within the Ministry of Health concerning the need for a focal point for HSR. It is likely that he, himself, will be nominated to play this role.

Handout 5.3. Guidelines for the development of individual plans of action

1. Module 5 provides the framework for developing the plan of action, while Modules 6, 7, and 8 offer ideas on strategies that could be useful. Figure 5.1 illustrates the relationship of the Modules to the Plan of Action. The boxes shown in the column entitled "Process of developing your action plan" illustrate the sequence of the steps in developing the plan during the workshop.

2. Please note that the **first four boxes** illustrate the first four steps that will be undertaken as **individual work** (either during or after the official workshop hours).

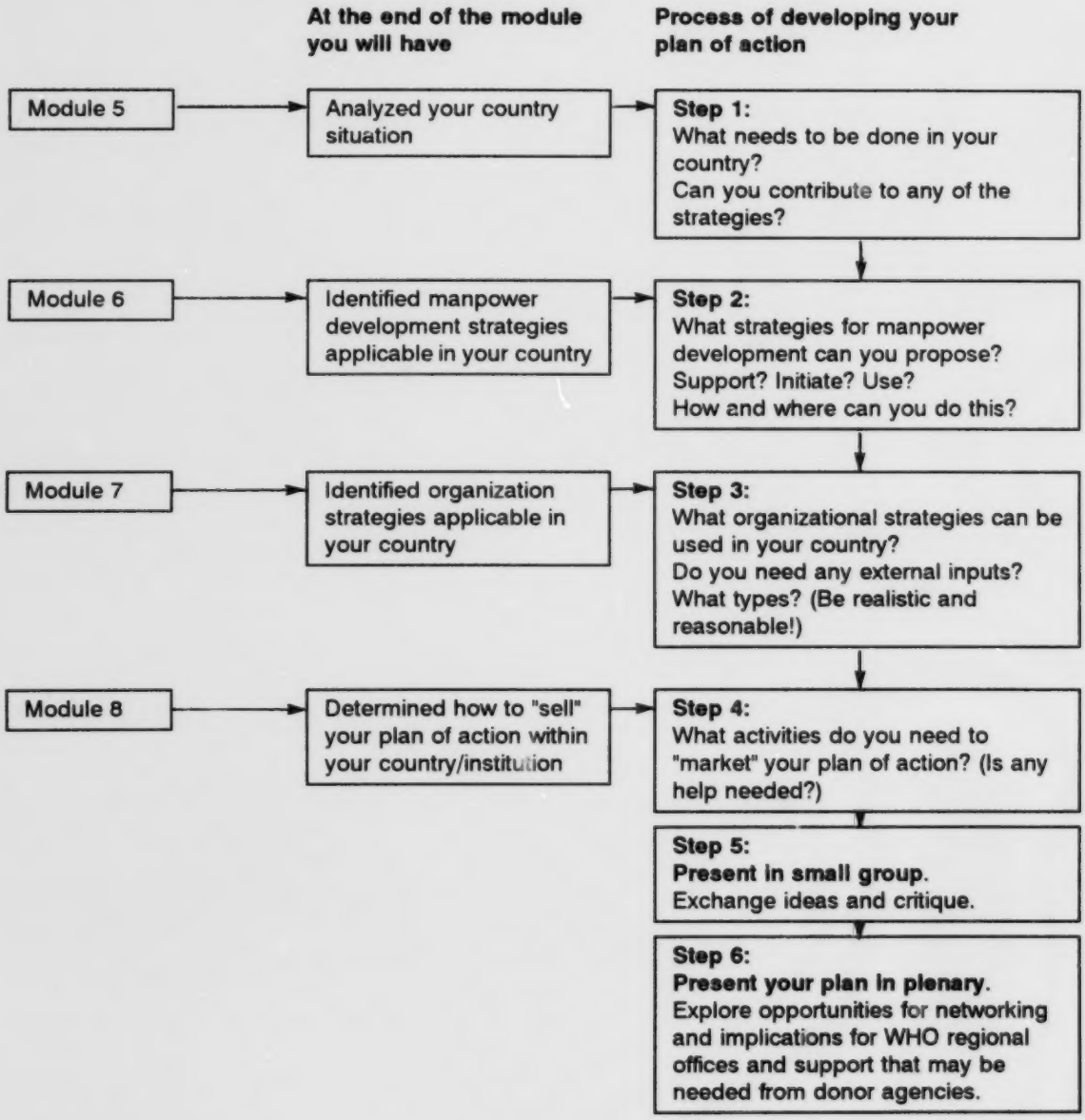
   Please enlist the assistance of **any** facilitator or member of the secretariat or any other participant if you wish to.

3. Step 5 is a **small group discussion** during which each participant will present his or her plan of action to the group. Facilitators and secretariat members will be assigned to each group.

4. The last step (6) is a **plenary session** at which a summary of each group's discussion will be presented. This summary should focus on identifying:

   - Common issues;
   - Opportunities for networking (i.e., contributing to and receiving contributions from other countries); and
   - Implications for:
     - Donor agencies and
     - Networking with WHO offices and other agencies.

Figure 5.1. Development of individual plans of action.


At the end of the module you will have
Process of developing your plan of action
Module 5
Analyzed your country situation
Step 1:
What needs to be done in your country?
Can you contribute to any of the strategies?
Module 6
Identified manpower development strategies applicable in your country
Step 2:
What strategies for manpower development can you propose?
Support? Initiate? Use?
How and where can you do this?
Module 7
Identified organization strategies applicable in your country
Step 3:
What organizational strategies can be used in your country?
Do you need any external inputs?
What types? (Be realistic and reasonable!)
Module 8
Determined how to "sell" your plan of action within your country/institution
Step 4:
What activities do you need to "market" your plan of action? (Is any help needed?)
Step 5:
Present in small group.
Exchange ideas and critique.
Step 6:
Present your plan in plenary.
Explore opportunities for networking and implications for WHO regional offices and support that may be needed from donor agencies.

Trainer's Notes

Module 5: PHASES IN DEVELOPING HSR AS A MANAGEMENT TOOL

Preparatory reading assignments for participants

The following materials should be made available to the participants at the start of the workshop with instructions that they should be read before Module 5 is presented.

- World Health Organization, 1990. *Health systems research*. Background document for the technical discussion at the World Health Assembly on the role of health research in the strategy for health for all by the year 2000. WHO, Geneva, Switzerland. A43/technical discussion/3.

- Commission on Health Research for Development, 1990. *Health research: essential link to equity in development*. Oxford University Press, New York. Executive summary, pp. xvii-xix.

Participants should also be asked to review, if possible, the rest of the material in the Commission's report.

The group exercise

Participants in any workshop will differ in their knowledge of their own country's situation and their insight into its problems and achievements. Participants will differ as well in the degree of their commitment and their personal ability to facilitate the development of HSR.

This module attempts to motivate each individual to expand his or her existing horizons to a greater or lesser degree, according to his or her own position, personal capability, and environmental situation. The role of the facilitator is to encourage this process.

Note that some participants may feel disadvantaged because of their lack of familiarity with the relevant activities in their own countries. The facilitator should be supportive of such participants and establish that "I don't know" is a legitimate position to be in and could be the starting point for a significant contribution by that particular participant.

Remember, this is a **training** workshop. It is not a forum for country reports or for a statement of country policies. It is intended to provide a personal learning experience for each participant. Therefore, encourage participants to look beyond the form and structure of situations and to analyze and derive conclusions.

Individual plans of action

At the end of the plenary session, brief participants regarding the Individual Plan of Action. Emphasize that this plan of action is to be completed in stages, with additional inputs added after each subsequent module. As participants develop their plans of action they should take the opportunity to tap the resources of various facilitators and agencies.

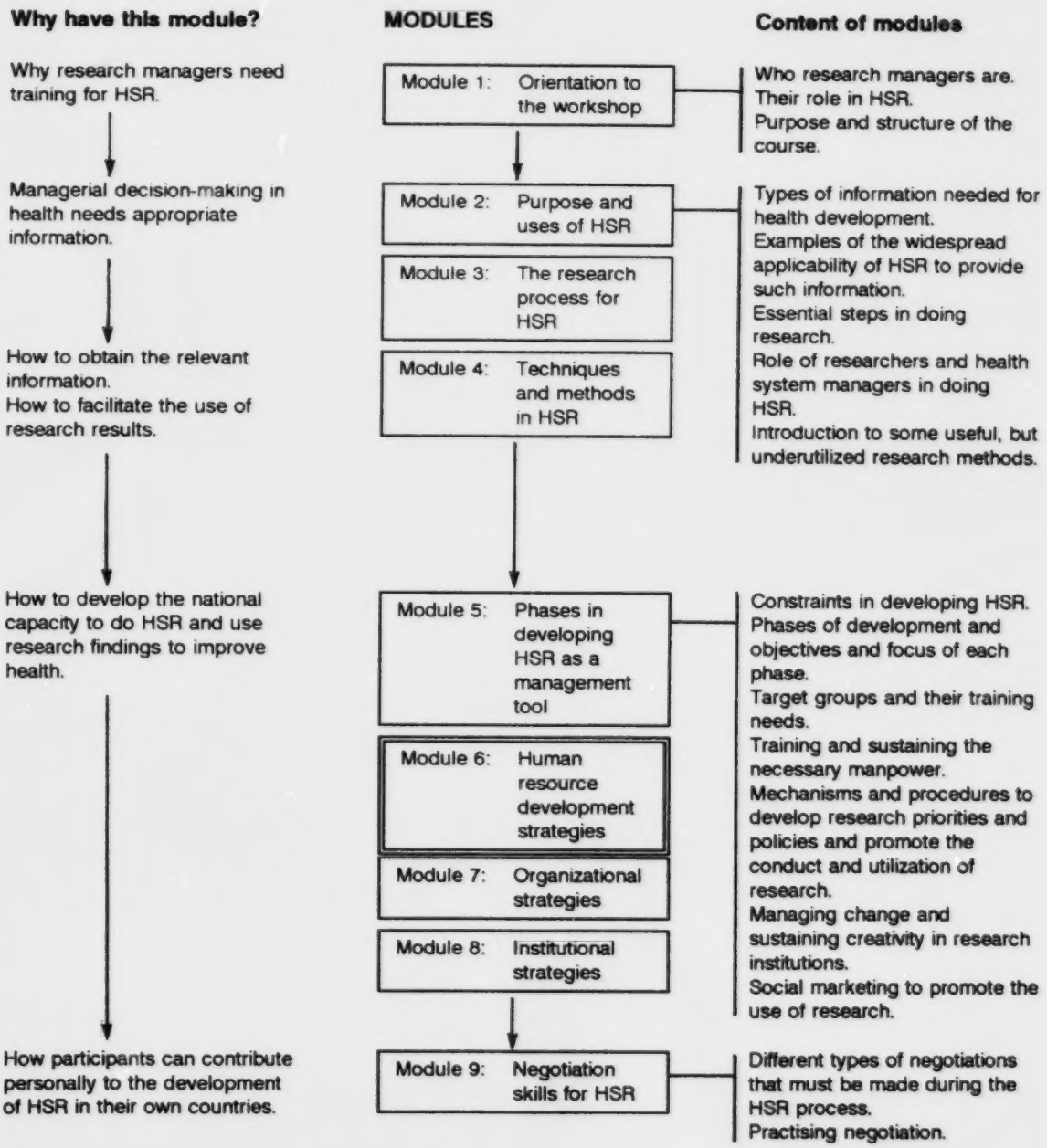
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 6:

HUMAN RESOURCE DEVELOPMENT STRATEGIES

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Managerial decision-making in health needs appropriate information.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
How participants can contribute personally to the development of HSR in their own countries.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 6: HUMAN RESOURCE DEVELOPMENT STRATEGIES

OBJECTIVES

At the end of the module, you should be able to:

1. Analyze the training needs associated with the various phases of developing HSR.
2. Describe the strategies available for developing human resources for each phase of development.
3. Describe the application of these strategies.

CONTENTS

Lecture/discussion

Exercise

Work on Individual Plan of Action

MATERIALS

Handout 6.1: Training in health management

Handout 6.2: Exercise: Assessing training needs

LECTURE/DISCUSSION

Introduction

In Module 5, the following phases in the development of HSR in a country were described as sequential but overlapping phases, all of which require repeated renewal:

> **Consensus building**, during which efforts are made to create a widespread acceptance of the value and importance of HSR as a tool to provide information for managerial decision-making.
>
> **Capacity building**, during which efforts are made to build a critical mass of managers, who can identify the types of research information needed and use such information appropriately, and researchers, who have the skills to provide such information in a timely fashion.
>
> **Consolidation**, during which structures, mechanisms, and procedures are created to sustain a continuing interaction between managers and researchers, institutionalize training initiatives, identify national research priorities, and align research funding and manpower to such priorities.[1]

To support this process of development, it is necessary to have appropriate human resource development strategies geared to the needs of each phase of development. Human resource development strategies include:

- Consensus development and training initiatives;
- Development of suitable training institutions; and
- A planned and systematic program to select, train, and sustain suitable personnel.

Consensus development and training initiatives

For each phase of development it is necessary to:

- Identify the target groups who should be included in the initiatives;
- Analyze their training needs; and
- Select strategies that are suitable for the various groups.

---

[1] World Health Organization, 1988. *Advisory Committee on Health Research report to the Director General*. WHO, Geneva, Switzerland. ACHR 29/88.15.

Groups who need training and orientation include:[2]

1. **Policymakers and senior managers;**
2. **Managers of health programs and services and health service personnel;**
3. **Researchers and academic staff, including**
   Experienced researchers,
   Junior researchers, and
   Academic staff;
4. **Research managers; and**
5. **Trainers for HSR.**

Policymakers and senior managers

This group is of crucial importance in the early phases of development; however, their sustained support for the later phases of development is also essential. Furthermore, it is from within the ranks of this group that crucial "prime movers" are needed to initiate the process of HSR program development and recruit political and economic support for the process.

Initiatives that have been useful for providing orientation and building consensus within this group include:

- Intercountry workshops or conferences for senior managers;
- A task force to assess the current research situation and recommend policy changes;
- National consultative meetings to increase awareness of HSR among key managers and researchers; and
- Inclusion of research results in policy statements that are prepared for top management.

During the capacity building and consolidation phases, initiatives have included:

- Case study workshops that illustrate practical uses of research information and the role of decision-makers in research management;
- Involvement of senior managers in developing national research priorities and participating in conferences where research results are presented;
- Involvement of senior managers in major HSR projects in appropriate roles; and
- Joint health manager/funding agency working sessions to reorient research funding policies toward priority information needs for health development.

For further details on these and other suitable strategies refer to HSR Training Series, Volume 1: *Strategies for promoting health systems research as a management tool*. IDRC/WHO/ 1991.

---

[2] Adapted from IDRC/WHO, 1989. *Training to support the development of health system research*. An unpublished working document produced by a technical working group sponsored by International Development Research Centre and the World Health Organization, Ottawa, Canada.

Managers of health programs and services and health service personnel

Management training: Efforts to develop HSR will be wasted unless there is concurrent development of the management expertise needed to use relevant information to improve the health of the community. The need for appropriate **management training**, including the use of research information in the problem-solving process, is described in Module 5. Several effective training materials are available. See Handout 6.1 for a few selected references.

Training in research: Module 5 analyzed the various constraints that affect the development of research skills within a country and established that, for simple research aimed at providing information for decision-making at the lower levels in the management hierarchy, a suitable strategy would be to train mid-level managers, health service personnel, and community leaders.

There are several basic principles for making this strategy effective:

- The training should include practical experience in designing and implementing a small research project.

- As far as is feasible, supervisors should be involved in nominating participants, selecting a problem for investigation, and facilitating the research process.

- Because participants can usually be released for training only for short periods, the training course can be designed as a two-part series of short (2–3 week) workshops with an interim period of 4–8 months during which participants implement the research projects in their own places of work.

Design research proposal	Workshop, part 1, 2–3 weeks
Conduct fieldwork	4–8 months
Analyze data, prepare and present report	Workshop, part 2, 1–2 weeks

- The training process should be highly interactive. For each step in the research process, a short theoretical presentation is followed by group work during which participants work in teams to develop that step in relation to their own project. Each group should be guided by a facilitator who is an experienced researcher. During the fieldwork phase, the facilitators should visit the participants and provide practical guidance and supervision. At the end of Part 1 of the workshop, each team of participants should have produced a research proposal and at the end of Part 2 each team should have completed and presented a research report and made plans to promote the utilization of results.

- Participants who are selected for this training should have the educational background and personal capacity to be principal investigators for simple studies in the future. Modifications of this training process (e.g., shorter duration, selected content, etc.) can be made for other personnel and community leaders who will participate in or assist in the research process (e.g., as data collectors, supervisors for data collection).

  For further details as well as for training modules to support this type of training refer to HSR Training Series, Volume 2, *Designing and conducting health systems research projects*. IDRC/WHO 1991.

Researchers and academic staff

As described in Module 5, this target group consists of:

- The existing pool of experienced researchers in health and health related fields;
- Junior researchers; and
- Academic staff.

In the consensus building phase, orientation of the existing pool of experienced researchers regarding the concepts and scope of HSR will enable them to immediately produce research to meet priority concerns and also to provide support for the training initiatives required for capacity building. Later, in the capacity building phase, the future generation of researchers should be adequately prepared in HSR. If the process of using research information to support decision-making at all levels of the health system is to become ingrained, curricula for training of all levels of health personnel must include the concepts and approaches of HSR.

Experienced researchers

Experienced researchers may be working in fields related to HSR (e.g., epidemiology, health economics, sociology, anthropology, policy analysis, technology assessment, quality assurance).

Reorientation of such researchers should be aimed at:

- Creating an awareness and understanding of problems of priority concern in the health system;
- Developing skills in communicating with health program managers and, if relevant, the community, both during the early stages of a study (problem identification and analysis) and in the later stages of presenting and promoting the use of research results; and
- Developing an understanding of the basic concepts and research approaches of sister disciplines to develop the skills to participate in multidisciplinary research.

Strategies for reorienting senior researchers may include presentations on the HSR approach, multidisciplinary seminars, and initiatives designed to involve these researchers in HSR studies through which they can "learn by doing."

Junior researchers and academic staff

The training of personnel who will become the future generation of health researchers should include an emphasis on the concepts and approaches used in HSR.

Universities that provide post-graduate (advanced level) training in research may need to reorientate their programs. Such reorientation is a complex process because it involves both

- The reorientation of academic staff; and
- Restructuring of the post-graduate training program.

Such a process must be planned systematically, taking into consideration the existing strengths and potential of the institution and the community that it serves (including the health system and the relevant managers in that system). The principles underlying the process are similar to those involved in the reorientation of experienced researchers with the addition of specific courses on research methodology which could incorporate the methods and materials described previously for training health service personnel to do research projects.

For further details on the issues and strategies relevant to universities, refer to HSR Training Series, Volume 3, *Strategies for involving universities and research institutes in health systems research*. IDRC/WHO 1991.

While universities are reorienting their programs, young researchers could also be trained in specialized "centres of excellence" that offer courses of 3 months to 1 year duration in disciplines (e.g., health economics research, health behaviour research, etc.) that are oriented to HSR.[3]

Research managers

To support consensus building and capacity building for HSR and to put into place and sustain the initiatives that are needed for consolidation, it is important that senior managers of research institutions, academic institutions, and research organizations understand the importance, as well as the process, of developing HSR. They must also understand the strategies necessary to ensure that HSR serves as an effective management tool.

This course on managing research is one of the initiatives designed to support this process. In addition, research managers should participate in the initiatives suggested for other target groups, thereby acquiring an in-depth understanding of the problems and potentials in their own countries.

Trainers for HSR

The training initiatives that have been described require fairly sophisticated educational methods. One prerequisite for serving as a trainer in these initiatives is to be an experienced researcher. Experienced researchers have seldom been trained in educational methodology and are generally unfamiliar with either interactive training methods or strategies for designing short training courses in research for a variety of target groups. Also, training for HSR requires trainers to be familiar with the basic concepts and principles of management, an area many experienced researchers also know little about.

Two approaches can be used in a complementary manner to train experienced researchers to become trainers in HSR:

- Attending specifically designed courses for training of trainers; and
- Participating (as trainees), in various types of training initiatives before becoming trainers.

---

[3] World Health Organization, 1988. *Health Systems Research Advisory Group: report of the second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2

Courses for training of trainers should include sessions on:

- Educational technology suitable for training mature participants in HSR;
- A review of the research process, to develop a systematic approach to teaching research; and
- Management of short courses.

For further details on this type of initiative and for suitable materials to support it, refer to HSR Training Series, Volume 5, *Training of trainers for health systems research*. IDRC/WHO 1991.

Institutions and organizations

To initiate and sustain the orientation and training initiatives that have been described, relevant institutional and organizational mechanisms are required. The types of arrangements that could be used are summarized in the box below.

Institutional and organizational mechanisms[4] to support training and orientation in HSR:

- **focal point units**, to promote and conduct consensus building initiatives;
- **lead agencies**, to provide training for capacity building;
- **expert committees and panels of experienced researchers**, to provide continued guidance to beginner researchers and health service personnel; and
- **curriculum review committees**, to integrate HSR into relevant curricula.

Focal point units[5]

The concept of focal point units will be described in Module 7. Since focal points should have direct access to top level policymakers and senior managers, they are ideally placed to take the major responsibility for the consensus building and orientation initiatives that have been described.

---

[4] World Health Organization, 1988. *Health Systems Research Advisory Group, report of the second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2.

[5] Tejuga, S. 1986. *Regional health services: health behaviour and health economics research programme*. Paper prepared for the Fifth meeting of the directors of medical research councils or analogous bodies and concerned research foci in the relevant ministries. World Health Organization, South East Asia Region, New Delhi. India.

Lead agencies

Lead agencies are institutions that have the research resources to enable them to conduct more complex research. Such institutions have experienced researchers in many relevant disciplines and probably have interinstitutional linkages that provide them access to researchers in other relevant disciplines.[6] Such institutions could be officially designated as "lead agencies for HSR," and orient their programs not only to provide research input for national health development, but also to conduct training activities to support capacity building in HSR. Thus, the training initiatives that have been described would have an institutional base.

Expert committees and panels of experienced researchers

Research is a complex activity that cannot be mastered after attending a single workshop or training course. Research expertise is gained during a process of "learning by doing." Health service personnel and junior researchers, who have attended the formal training initiatives described earlier, will require continued guidance when they embark on their own projects. Formal arrangements to provide such guidance can be made by appointing experienced researchers to committees or panels that serve as a "resource bank" for this purpose. Such arrangements have been found to be useful and effective in several countries.[7]

Curriculum committees in academic and training institutions

Universities, schools of public health, and institutes for training health personnel will all need to consider how the basic concepts of HSR can be integrated into their curricula. The purpose will be to create an "HSR culture" rather than to produce researchers. The emphasis should be on the need to obtain information and use it in decision-making. This will be of particular importance in situations where the norm of behaviour in the past has been a blind adherence to prescribed procedures. Curriculum committees must be oriented and motivated to find imaginative ways to integrate the basic concepts and approaches of HSR into existing curricula without overburdening them.[8]

Planned program for human resource development

For training and orientation strategies to be effective, it is necessary to have a **planned** program for human resource development. In summary, the issues that need to be considered[9] are:

---

[6] World Health Organization, 1987. *Promotion of research career structures in developing countries*. Report of an informal consultation. WHO, Geneva, Switzerland. WHO/RPD/87.

[7] Pathmanathan, I. 1987. *A review of the development of health systems research in Botswana*. Report of a short-term consultant to the Ministry of Health. World Health Organization, Geneva, Switzerland.

[8] World Health Organization, 1986. *Health Systems Research Advisory Group: report of the first meeting, Geneva*. WHO, Geneva, Switzerland. HSR/86.1.

[9] World Health Organization, 1986. *Guide for planning training and research programmes in health systems research*. WHO, Geneva, Switzerland. HSR/86.2.

- Analyzing training needs for the different phases of development;
- Selecting suitable candidates, taking into consideration their personal and organizational potential for making sustained contributions in the future;
- Allocating sufficient funds for the training initiatives;
- Using participants from previous initiatives to give input into subsequent initiatives; and
- Enhancing credibility and recognition for training courses by providing suitable academic degrees or certificates.

EXERCISE: Assessing training needs

Pass out Handout 6.2 to the participants and give them instructions on how to complete the exercise. Then divide the participants into small groups. Each group should give its members a few minutes to read and do individual analysis of their country situations, using Table 6.2. Then, after electing a chairperson and rapporteur, each group should work to fill out Table 6.3.

WORK ON INDIVIDUAL PLAN OF ACTION

Participants should be asked to use the insights gained during the group exercise as they prepare suitable human resource development initiatives to include in their individual plans of action. This section of the plans of action should be prepared by each participant before the next session.

Handout 6.1. Training in health management

1. Bibliography of materials to support management training at district level

Roten, A. 1988. *Managing system for better health: a facilitator's guide.*. World Health Organization, Geneva, Switzerland. Western pacific education in action series, no. 2.

Vaughn, P., Morrow, R.H. 1989. *Manual of epidemiology for district health management*. World Health Organization, Geneva, Switzerland.

Janovsky, K. 1988. *The challenge of implementation district health systems for primary health care*. World Health Organization, Geneva, Switzerland.

McMahon, R., Barton, E., Piot, M. 1980. *On being in charge: a guide for middle level management in primary health care*. World Health Organization, Geneva, Switzerland.

2. Summary of short courses in health management

As described in this module, one step in promoting the use of information in decision-making is to provide basic training in health management for health managers.

Table 6.1 provides a summary list of short courses on health management as well as sources for additional information.

Table 6.1. Courses in health management.

Country	City	University/institution	Department/faculty	Course title/subject	Length
UK	Stoke-on-Trent	Keele University	Centre for Health Planning & Mgmt	Int. workshop on hlth econ. in DCs	3 weeks
UK	Leeds	Leeds University	Nuffield Institute	Diploma in health planning & mgmt.	9 months
UK	Leeds	Leeds University	Nuffield Institute	MA in health mgmt. planning & policy	12 months
UK	Liverpool	Liverpool School of Tropical Medicine		Master's degree in community health	12 months
UK	London	London School of Economics, London School of Hygiene and Tropical Medicine		MSc health planning and financing	9 months

Table 6.1. Continued.

Country	City	University/institution	Department/faculty	Course title/subject	Length
UK	London	London School of Economics, London School of Hygiene and Tropical Medicine		MSc health economics & financing in DCs	3 weeks
UK	Brighton	University of Sussex	Institute of Devt. Studies	Implementing hlth for all	3 months
UK	Swansea	Univ. College/ Univ. Wales	Centre for Development Studies/Fac. of Medicine	MSc in epidemiology & health planning	12 months
UK	York	York University	Centre for Health Economics	Health economics/ planning for DCs	10 weeks
UK	York	York University	Centre for Health Economics	MSc in health economics	9 months
USA	Boston, MA	Boston Univ. School of Medicine	School of Public Health	Financing health care in DCs	12 weeks
USA	Boston, MA	Boston Univ. School of Medicine	School of Public Health	Management methods of int. health	12 weeks
USA	Boston, MA	Boston Univ. School of Medicine	School of Public Health	Health care in developing countries	12 weeks
USA	Cambridge, MA	Harvard University	School of Public Health	Takeml fellowships	9 months
USA	Baltimore, MD	Johns Hopkins University	School of Public Health	Summer program in epidemiology	3 weeks
Germany	Heidelberg	Univ. of Heidelberg	Inst. of Trop. Hyg. & Public Health	Community health and health management in DCs	12 months
Nether-lands	Amsterdam	Royal Trop. Institute (KIT)		Inst. course in health development	10 months
Belgium	Antwerp	Prince Leopold Institute Trop. Med.		Inst. course in health development	10 months

Source: Jones, A. 1990. *Compendium of courses relevant for health policy development.* International Health Policy Program, Washington, DC.

Handout 6.2. EXERCISE: Assessing training needs

The purpose of this exercise is to help you assess the training needs associated with each stage of development in HSR in your country. It will help you identify in realistic terms the types of activities you and your institution can develop and how they can assist in developing the country's capacity for HSR.

Instructions

1. **Preparation for the group work**

   Spend a few minutes reviewing the group work from Module 5 and analyzing your own country situation in terms of training needs. The following descriptions of characteristics in terms of the commitment to HSR and the capacity to do research may assist you in your analysis. These categories are not intended to be comprehensive. They are provided as an example of the approach that can be used, to form a basis on which to propose the training initiatives that will be discussed in group work. Review Table 6.2 below and decide which category best describes your country or region at the present time.

Table 6.2. Characterization of countries'/regions' potential for using HSR in support of "Health for All."

National commitment and institutional mechanisms	Capacity to do research		
	Poor	Fair	Good
Poor	//////	(b)	(d)
Fair	(a)	(c)	(e)
Good	//////	(e)	//////

For the labelled categories in the table, a brief description of the situation follows.

Category (a): Previous input has succeeded in creating a favourable attitude toward HSR. However, there is a paucity of researchers.

Category (b): Some research skills are available in academic and research institutions, but are isolated from managerial needs (i.e., researchers are not aware of concepts of HFA/PHC, have no skills in multidisciplinary, intersectoral approaches, and no understanding of managerial problems).

Category (c): A small HSR unit is providing leadership within health services and is actively involved in doing HSR. Some managers are committed and are using HSR. However, staff mobility (promotions, migrations, transfers) may destroy the gains that have been made. Demand for HSR exceeds the ability to do it. Academic researchers are uninvolved in HSR.

Category (d): Good quality researchers are abundant in research and academic institutions and in fields like family planning, agricultural economics, and clinical research. However, there are no linkages between research and management. Management's ability to use research is limited.

Category (e): Research in support of HFA is very common. However the research capacity and institutional mechanisms are inadequate to deal with the complexity of problems that require research (e.g. clinical/economic/behavioural dimensions).

2. Group exercise

Work in your small group and select a chairperson and rapporteur. The chairperson should then ask each group member to give an assessment of which category in Table 6.2 best describes his or her country's situation. Then, using Table 6.3 as a guide, the group should identify the priority groups and their training needs. Consider what types of training initatives are needed and the prerequisites for their success.

Note: Each group will **not** be able to provide a comprehensive analysis of the training needs of each of the countries represented in the group. This exercise is only intended to give you some practice with this type of analysis.

Table 6.3. Outline for discussing training initiatives.

Training needs	Target groups				
	Policymakers and senior managers	Health service personnel	Experienced researchers	University teachers & junior researchers	Trainers
Consensus building					
Capacity building					
Consolidation					

Based on the insights gained during the group work, participants should include suitable human resource development initiatives in their own individual plans of action.

Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 7:

ORGANIZATIONAL STRATEGIES

Rationale and content of the modules in this volume

Why have this module?	MODULES	Content of modules
Why research managers need training for HSR.	Module 1: Orientation to the workshop	Who research managers are. Their role in HSR. Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.	Module 2: Purpose and uses of HSR	Types of information needed for health development. Examples of the widespread applicability of HSR to provide such information.
	Module 3: The research process for HSR	Essential steps in doing research.
How to obtain the relevant information. How to facilitate the use of research results.	Module 4: Techniques and methods in HSR	Role of researchers and health system managers in doing HSR. Introduction to some useful, but underutilized research methods.
How to develop the national capacity to do HSR and use research findings to improve health.	Module 5: Phases in developing HSR as a management tool	Constraints in developing HSR. Phases of development and objectives and focus of each phase.
	Module 6: Human resource development strategies	Target groups and their training needs. Training and sustaining the necessary manpower.
	Module 7: Organizational strategies	Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
	Module 8: Institutional strategies	Managing change and sustaining creativity in research institutions. Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.	Module 9: Negotiation skills for HSR	Different types of negotiations that must be made during the HSR process. Practising negotiation.

Module 7: ORGANIZATIONAL STRATEGIES

OBJECTIVES:

This module will enable you to develop and implement strategies to:

1. Strengthen the coordination of health research.
2. Establish and strengthen institutions for HSR.
3. Realign and strengthen research funding mechanisms.
4. Promote the utilization and quality of research through improved communication and interaction.

CONTENTS

Reading assignment for participants prior to presentation of the module:

> World Health Organization, 1990. Management of health research. In *Research for health for all: A global overview.*. Background document to the 43rd World Health Assembly technical discussions on the role of health research. World Health Organization, Geneva, Switzerland.

Organizational strategies (lecture/discussion)

Individual work: Reviewing existing organizational structures and processes

Group work: Identifying organizational interventions

Plenary session: Presentation and discussion of group work

Work on individual plan of action

MATERIALS

Handout 7.1: Priority areas for medical research (to be handed out at the end of the Module)

Handout 7.2: Guidelines for individual work: reviewing existing organizational structures and processes

Handout 7.3: Guidelines for group work: identifying organizational interventions

Trainer's notes

ORGANIZATIONAL STRATEGIES (lecture/discussion)

Introduction

Research managers can play a crucial role in the process of institutionalizing health research and HSR in particular. It is, therefore, important that they are able to assess the organizational structures and processes for the development of health research in their own countries and to contribute to the strengthening of such structures and processes.

Some of the constraints in consolidating HSR within a country have been described in Module 5, and some strategies that have been found to be useful in dealing with such constraints were also introduced in that module. This module elaborates on strategies related to organization structures and processes that are relevant at a macro level in the country. (A subsequent module deals with strategies that are relevant within research or academic institutions.)

The strategies discussed in this module are relevant to health research in general and HSR in particular. They include strategies that strengthen:

- The national coordination of health research;
- The institutional structures;
- The mechanisms for funding; and
- The mechanisms for communication and interaction.

Strengthening the national coordination of health research

National health development requires a well-coordinated program of research and development.[1] Some of the key elements for facilitating the coordination of such a program include:

- A health research policy linked to the national health policy;
- A coordinating focal point for health research;
- Intersectoral coordination; and
- International coordination.

Establishing a health research policy

A country's ministry of health has the responsibility of coordinating and strengthening national health development. Therefore, this ministry must play a major role in the formulation of a comprehensive health research policy and development of research programs that are in line with the national policy. The research policy should be comprehensive in nature in the sense that it should cover the three major branches of health research: biomedical, clinical, and health systems research.

---

[1] Commission on Health Research for Development, 1990. *Health research: essential link to equity in development*. Oxford University Press, New York.

Biomedical research is essential because it can make an important contribution to the prevention of disease. Ministries of health usually have biomedical research institutions within their jurisdiction, but often neglect to provide policy guidance to these institutions. Clinical research is important, because it can improve diagnosis and treatment for individual patients and HSR is essential because it is an important tool for supporting health development.

The ministry must ensure that these three branches of research are developed in a balanced manner. Generally clinical research and HSR are underdeveloped compared to biomedical research and will need to be strengthened.

A health research policy can, therefore, be defined as a comprehensive plan for research that is in line with the national health policy as well as the policy for science and technology. The plan should include implementation strategies. It should also outline areas for research, the infrastructure needed, and the resources required. The two policy documents, one on a research policy for Europe for "Health for All" and another on priority areas in research, developed by the regional office for Europe are examples of such plans.[2 3]

Mechanisms for policy formulation

Important mechanisms for research policy formulation are:[4 5]

1. **Identifying political commitment:** Health research is often not high on the political agenda and this is particularly true of HSR. Without an awareness of the need for HSR and a political commitment to it, HSR will not be developed adequately. The role of the ministry of health is crucial for this.

2. **Using different policy structures:** Patterns of management of health research also vary greatly from country to country. In many countries the ministry of science and technology is the major central agency for planning research, including health research. In other countries this task has been assigned to national academies of science, medical research councils, or ministries of planning.

   In most countries, the ministry of health plays a marginal role in planning health research generally and HSR in particular. This position should be redefined because the commitment of the ministry of health to planning health research is an essential prerequisite to a successful health research policy.

---

[2] World Health Organization, 1988. *Research policies for health for all.* Regional Office for Europe, Copenhagen, Denmark. European health for all series, no. 2.

[3] World Health Organization, 1988. *Priority research for health for all.* Regional Office for Europe, Copenhagen, Denmark. European health for all series, no. 3.

[4] Van Etten, G.M. 1989. *Guidelines for the development of health systems research at national level.* WHO, Geneva, Switzerland.

[5] Van Etten, G.M. 1988. *The development of health systems research in Malaysia.* Assignment report for the World Health Organization, 11–22 July 1988.

3. **Using different administrative structures within the ministry of health:** Without the necessary administrative structures, the ministry of health cannot promote the health research function. The types of structures that may be useful are a standing committee on research with representatives from the major policy divisions, a research coordination unit (or focal point) with responsibility for the preparation of a health research policy and program, or both. Again, the major initiating role of the ministry of health in the process of strengthening health research cannot be overemphasized.

4. **Using the research community:** An important principle in research policy formulation concerns the interaction of policymaking and research agencies. The crucial role of competent scientists in developing a national research program and in setting priorities for research should be recognized. These priorities should take into account the major national problems in the health situation, as well as in the delivery of health services. The scientists may represent research institutes or national research organizations, such as a medical research council or an academy of science.

   The partnership of policymakers and scientists in research policy formulation and in setting priorities may be fostered through a national conference or through the establishment of an advisory committee or council that can develop, implement, and monitor the process of health research management at the national level, with a special emphasis on the coordination of HSR.

Establishing a focal point

Strengthening coordination of health research at the national level can be achieved by establishing a focal point at the ministry of health. The functions of the focal point, to some extent, will vary depending on the degree to which the ministry's role in coordinating health research has developed in a country. The following is the range of functions that could be considered:[6]

- Assisting in the formulation of a research policy, in line with the national health policy and the policy for science and technology;
- Helping to identify priority areas for research that are relevant to the health needs of the country;
- Promoting, coordinating, and conducting health research in conformity with that policy;
- Assisting in identifying appropriate research institutions within the country;
- Facilitating and coordinating interaction between interested multilateral, bilateral, and nongovernmental organizations and the government, informing those organizations about priority health research needs, and identifying the necessary additional expertise and funds needed;
- Developing a network within the country to promote HSR, the exchange of information, and the utilization of research findings;
- Acting as a clearing house to collect and disseminate information on planned, ongoing, and completed HSR projects;

---

[6] World Health Organization, 1988. *Health Systems Research Advisory Group: report of the second meeting, Gaborone, Botswana*. WHO, Geneva, Switzerland. WHO/HSR/88.2.

- Assisting in the development and implementation of training programs in HSR for health workers, health-related staff at all levels, and research workers; and

- Developing mechanisms for securing technical and financial support for HSR projects that will be implemented at provincial and district levels.

The staff of a focal point research unit should be multidisciplinary and should be recruited from public health, epidemiology, behavioral sciences, and clinical medicine.

The head of the unit should be a senior-level person with substantial background in health research, who has direct access to the director-general and top-level executives and who also has credibility within the research community. The staff members will have full-time responsibilities for the three branches of research: HSR, biomedical, and clinical research, with a particular emphasis on HSR.

The location of this unit also deserves special attention. To guarantee the necessary support, important prerequisites are that the research coordination function cut across the various divisions in the ministry, that the unit be clearly identifiable, and that the head of the unit be directly answerable to the director-general or another top-level executive.

In the past few years, focal points have been established in various countries (for example, in the countries participating in the Joint WHO/DGIS/KIT Project on Health Systems Research for Southern Africa).

Promoting intersectoral coordination

To fulfill its initiating role in health research policy, the ministry of health needs support from other departments and institutions, such as the ministry of science and technology, universities, and the medical research council. The functions of the medical research council are funding of health research, setting scientific standards to improve the quality of the research, development of research programs, and development of career structures and training programs for researchers. To strengthen national coordination in health research, linkages must be established between the ministry of health, the medical research council, and other key agencies involved in health and health-related research.

Promoting international coordination for priority health research

Possible approaches in this area include:

- Developing policy support at the national and international levels;
- Strengthening capability for research management;
- Building international networks of researchers and policymakers;
- Using national and regional centers; and
- Attracting funds.

Institution strengthening

An adequate infrastructure is an important requirement for conducting health research. Health research is carried out in academic institutions (i.e., faculties of medicine, related faculties, and specialized research institutes). In many countries, ministries of health have biomedical research institutes under their jurisdiction.

In most countries, there is much less emphasis on HSR and, to a certain extent, clinical research compared to biomedical research in health research programs of such institutions. Among the main determining factors affecting this difference in emphasis are the lack of a comprehensive research policy and the traditional focus on biomedical research in research institutes.

Considering the relevance of HSR to the policy needs of the country and taking into account the marginal position of HSR when compared to the total volume of health research, it becomes evident that institution strengthening is of major relevance in the field of HSR.

The institutional development of HSR should take place in one or more universities or research institutes that have experts in the various disciplines concerned, such as epidemiology, public health, medical sociology, and health economics. In poor countries, there may be a shortage of research institutions. Here a choice has to be made concerning whether priority should be given to the creation of new research capability only in universities or also in specialized research institutes.

Selecting a suitable institution

There are, in principle, several options for the development of institutes for HSR: institutes may be developed within one or more universities or under the ministry of health, either as fully specialized institutes in this field or as part of institutes for biomedical research.

University-based institutions

Within universities, faculties of medicine and faculties of social sciences have a major role to play in strengthening the national capability for HSR. Medical faculties should explore possibilities for liaising with other departments such as economics, sociology, and psychology to carry out common HSR programs.

The ministry of health can invite university staff for consultation on their possible contribution to a program of HSR.

Research institutes within the ministry of health

In many countries, ministries of health have research institutions within their jurisdiction. They are often almost exclusively oriented toward biomedical research. In many cases, the ministry does not review the research programs of the institute on a regular basis, nor does it direct these programs so that they will be in line with national health priorities. Moreover, HSR usually finds itself in a marginal position in these institutes. This situation reflects a generic problem in predominantly biomedical research institutions that typically do not have scientists with training in disciplines of direct relevance to HSR. This is a serious dilemma that may hinder the development of HSR.

Taking these considerations into account, the best solution may be to develop a new infrastructure for HSR, either within the universities or in a specialized institute under the responsibility of the ministry of health. Because the development of HSR should take place in an institution that has experts in the various disciplines concerned, its establishment within a predominantly biomedical research institution may be difficult.

Establishment of a lead agency

Identification and establishment of a lead agency for HSR may help to strengthen this category of health research. The function of the lead agency is to provide the specialized research expertise that is needed:

- To conduct HSR studies that have national significance or contribute to policy decisions;
- To facilitate training in HSR and provide continued support for beginning researchers;
- To cooperate in international studies in HSR and to participate in international coordination in this field; and
- To provide technical advice and support on HSR to the ministry of health.

The lead agency may be established within the ministry of health or a university.

Realigning and strengthening mechanisms for funding

Sound funding mechanisms can be extremely important in the development of HSR. Among the main sources for HSR funding are the ministry of health, the ministry of science and technology, the medical research council, universities, and various donor agencies. The ministry of health can play an important role in coordinating funding agencies in the field of health research. The ministry can also identify priority areas and develop criteria for review of proposals.

The research budget of ministries of health is generally allocated for the operating costs of research institutions that concentrate on biomedical research. At the same time, the budget for research proposals approved by the ministry (grants system) is usually very small. Under the latter system, proposals for HSR must usually compete for the same funds as clinical and biomedical research. This situation does not contribute to the development of HSR. It can be improved in three ways:

- By earmarking the funds under the grant system of the ministry of health to HSR projects on topics or problems nominated by the ministry;
- By gradually reallocating some of the funds within the health ministry from biomedical research institutions to an institute for HSR; and
- By increasing the research budget for HSR and by attracting additional funds from donor agencies.

It is clear that none of these changes can be made without the ministry playing an active role in identifying priority areas for research.

The allocation of research funds to health-sector projects through ministries of science and technology or medical research councils is often biased toward biomedical research as well, with little attention paid to HSR. The orientation toward biomedical studies can be explained largely by the lack of mechanisms for linking the development of research policy to the national health development process.

Similarly, to strengthen the national capability for HSR, the existing academic and research institutions have to realign their policies for funding research.

In summary, existing structures and procedures for funding health research, including HSR, must be aligned to the national health research policy and priorities. Commissioned research should be directed toward priority problem areas. The ministry of health should actively participate in research committees at the ministry of science and technology as well as in the medical research council to promote increased awareness of the need for changing the funding mechanisms in health research.

Establishing mechanisms for communication and interaction

Regular communication and interaction is needed between researchers and managers as well as among researchers in the research institutions.

Between researchers and managers: promoting relevance and utilization

Research managers have a responsibility to develop mechanisms for research. Health research results need timely dissemination, not only by publication in scientific journals, but also by communicating with health administrators. If health research is to be effectively applied, the interaction of researchers and policymakers is essential. This interaction has to be actively fostered. The involvement of policymakers should be sought throughout the research process. Moreover, health managers should play an important role in planning and monitoring the implementation of research results. Thus, it is important that sound mechanisms for communication are established. These may include conferences or meetings with joint manager/researcher participation; publication of newsletters, bulletins, research reports, compilations of case studies, and a directory of health research; and the involvement of researchers in the national health policy process (e.g., though expert committees, coordinating committees, task forces).

Among researchers: peer review

One of the major aims of communication among researchers themselves is to improve the quality of the research. This can be achieved by the presentation of research results at scientific conferences, through a system of peer review, and by the application of evaluation procedures.

Monitoring and evaluating research programs

One of the responsibilities of a research manager is the development of mechanisms for monitoring the research program. The monitoring system may include reporting procedures and steering or review committees with representation from both policy and research communities.

Research evaluation should deal not only with the scientific value and quality of the research, but also with its significance for health policy and health practice. Mechanisms should be developed for evaluation, first within the research institutions themselves, and second by applying external auditing procedures. For example, a committee of experts from outside the institution could be organized to visit the institution at regular intervals (e.g., every 4–5 years).

Development and implementation of strategies

Each of the strategies described in this module has been developed and used in one or more countries. The selection of strategies will depend on the stage of development within the country, the potential for change, and the prevailing organizational, political, and economic forces. Some of the approaches that have been successful are:

- A country review and recommendations to the national authorities by an external consultant. Consultancies, focused on a review of this type, have been funded by the WHO Global Health Systems Research Programme, and guidelines have been developed for such reviews.[7]

- A country review by a task force that includes knowledgeable and respected personalities from other countries as well as from within the country. The task force presents and discusses its recommendations with the national authorities. This approach has been used in several countries in the eastern Mediterranean region.

- Initiatives by prime movers within the country, using existing forums and mechanisms. For example, in Malaysia a conference was organized to establish research priorities.[8] An extract from the output of this exercise appears in Handout 7.1. The "research priorities" document has subsequently been used in approving research grants. In Botswana, the ministry of health invited researchers and research institutions to participate in health planning workshops, during which national health development plans were formulated.[9]

GROUP WORK: Identifying organizational interventions

Pass out Handouts 7.2 and 7.3. Divide the participants into small working groups, asking them to fill out the "Guidelines for reviewing existing organizational structures and processes" in Handout 7.2 and then work together as a group, following the instructions in Handout 7.3. Each group should be prepared to present the results of its work in plenary.

PLENARY SESSION

The purpose of the plenary is to give participants an opportunity to exchange experiences and views on practical organizational strategies for strengthening HSR.

---

[7] Van Etten, G.M. 1989. *Guidelines for the development of health systems research at national level.* WHO, Geneva, Switzerland.

[8] University of Malaya and National Council for Scientific Research and Development, 1987. *Report of the conference on health research management.* Kuala Lumpur, Malaysia.

[9] Pathmanathan, I. 1987. *A review of the development of health systems research in Botswana.* Report of a short term consultancy. World Health Organization, Geneva, Switzerland.

The module facilitator should chair the session, while the other facilitators serve as resource people.

A representative from each group should be invited to present:

- The list of strategies that have been identified by group members as feasible and useful in their countries; and
- A summary of the discussions held on selected issues.

The module facilitator should then invite comments and discussion on the issues that have been presented. It is useful to select issues that have not been explored in depth, that appear to be controversial, or that have not been understood.

The module facilitator should end the session by reviewing the framework of the module and summarizing the major issues that have been discussed.

WORK ON THE INDIVIDUAL PLAN OF ACTION

Based on the insights gained during this module, participants should elaborate their individual plans of action.

Handout 7.1. Priority areas for medical/health research: classification of research areas[10]

PROBLEM AREAS	DISEASES/CONDITIONS
I. Research to facilitate application of available technology to control food/water-borne diseases, nutritional deficiencies, inappropriate fertility and immunizable diseases	Food and water-borne diseases Nutritional deficiencies Inappropriate fertility Immunizable diseases
II. Research on local diseases for which basic knowledge regarding control is still lacking	Vector-borne diseases Viral diseases Bacterial diseases Parasitic non-vector borne diseases Behavioural disorders Neoplasms (geographic/ethnic)
III. Research in non-communicable diseases a. Hazardous factors are known (e.g., smoking, alcohol)	a. Cardiovascular diseases Respiratory diseases Accidents Substance abuse (glue, drugs, alcohol) Metabolic disorders Occupational diseases
b. Hazardous factors are not known	b. Psychotic disorders Neoplasms (cosmopolitan)
IV. Research to reduce morbidity and mortality and to limit disability for conditions for which prevention is not known	Endocrine disorder Congenital and genetic diseases Degenerative diseases Metabolic disorders
V. Research to meet needs of policymakers and planners	Transmigration Alternative system of health (traditional medicine) Resources - availability and deficiency Management of health services - community involvement - evaluation of health services

[10] This table is an extract from the output of a national exercise to establish research priorities in Malaysia, 1988.

Handout 7.1. Continued

PROBLEM AREAS	DISEASES/CONDITIONS
VI. Research for technology development	Biotechnology: - Pharmaceuticals - Biologicals - Reagents Computerization in health care Medical equipment and instrumentation (including design, production, and maintenance) Appropriate technology for health
VII. Research in toxicology	Poisoning by chemicals, natural toxins (e.g., from plants, animal, or microbial sources) To ensure safety to the population and the maintenance of health standards

Handout 7.2. Guidelines for reviewing existing organizational structures and processes

Using the questions listed below, review the situation in your own country with respect to the main issues that have been dealt with in this module. Place a (✓) next to the appropriate response.

This review is intended to help you:

- **Identify strategies** that would be feasible and useful to implement in your country, and
- **Identify issues** that you may wish to discuss in your group.

1. Health research policy

1.1 The health research policy in my country:

- ☐ is in existence and satisfactory. (Go to 1.3)
- ☐ is in existence but needs review.
- ☐ needs to be formulated.

1.2 What would be a feasible mechanism for review or formulation of a health research policy?

_____

_____

_____

Would you be able to activate any of the following for the above purpose?

Ministry of Health	☐ yes ☐ no
Ministry of Science and Technology	☐ yes ☐ no
Medical Research Council	☐ yes ☐ no
Other relevant agencies	☐ yes ☐ no

Are there any issues on this topic that you wish to raise during group discussion?

_____

_____

_____

1.3 A focal point for health research:

☐ is not needed in my country because the proposed functions are being performed by existing mechanisms. (Go to 1.4)

☐ is needed in my country.
What would be a suitable location? Why?

_____

_____

☐ exists but needs to be reviewed.
What are the existing problems? What strategies are needed to improve it?

_____

_____

_____

Are there any issues on this topic that you wish to raise during group discussion?

_____

_____

_____

1.4 Intersectoral coordination and international coordination for health research in my country:

☐ is satisfactory. (Go to 2)

☐ needs to be strengthened.
What strategies would be useful and feasible?

_____

_____

_____

Are there any issues on this topic that you wish to raise during group discussion?

_____

_____

2. Institutional strengthening

2.1 Institutional resources for health systems research in my country:

- ☐ are adequate and function well. (Go to 3)
- ☐ are inadequate, although there is considerable institutional capacity for other types of research. (Go to 2.2)
- ☐ are inadequate and resources for other types of research are limited as well. (Go to 2.2)

2.2 A lead agency for health systems research:

- ☐ is *not* needed because the proposed functions are provided by existing agencies.
  How could such agencies become more effective? (Consider networking, formal recognition of the roles of the agencies, etc.)

_____

_____

_____

- ☐ is needed.
  What institution would be suitable? Why would it be suitable?

_____

_____

_____

Are there any issues you wish to raise during group discussion?

_____

_____

_____

3. Funding mechanisms

3.1 Research funding mechanisms in the country:

- ☐ are aligned to support research in support of priority health problems, including research for health development. (Go to 4)

☐ need to be realigned to support health development.
What strategies would be effective and acceptable? (Consider commissioned research, targeted research, increasing the allocation of grants for HSR, etc.)

_____

_____

_____

Are there any issues you wish to raise during group discussion?

_____

_____

4. Mechanisms for communication

4.1 Mechanisms for interaction between researchers and managers:

☐ are available and adequate. (Go to 4.2)
☐ need to be developed or strengthened.
What strategies are feasible?

_____

_____

_____

4.2 Forums for interaction among researchers (for presentation, discussion of research):

☐ are available and adequate.
☐ need to be developed or strengthened for HSR. How can this be done?

_____

_____

_____

Are there any issues you wish to raise during group discussion?

_____

_____

Handout 7.3. GROUP EXERCISE: Identifying organizational interventions

The purpose of the exercise is to identify existing organizational structures and processes, identify strategies that could be introduced to support the development of HSR, and develop feasible approaches for implementing such strategies.

Instructions

1. Each participant should work individually to review the existing organizational structures and processes in his/her own country using the guidelines provided in Handout 7.2. During this review, each participant should identify some issues for discussion.

2. After the individual work is finished, begin the group discussion. (The chairperson and rapporteur should be selected from the group. The facilitator should serve as a resource person.)

   Each group should work on the following tasks:

   2.1 List the strategies identified by group members for each of the following topics:

   - Health research policy
   - Institutional strengthening
   - Realignment of funding mechanisms
   - Mechanisms for communication

   The purpose of this listing is to exchange ideas and assist the chairperson and rapporteur who will present a summary during the plenary that will illustrate the application of various strategies in different country contexts.

   2.2 Discuss selected issues that are raised by group members.

   Examples of issues that can be discussed in depth include:

   What are the experiences of countries that have set up focal point units? How can such units be made effective?

   What are the essential characteristics of an institution that has potential to be developed as an institution for HSR?

   Participants should suggest other issues that are of interest to the group.

   The purpose of this discussion is to enable members to have a deeper understanding of selected issues. Each group should agree to confine its discussion to a limited number of issues of common interest.

A summary of this discussion should be presented at the plenary session.

Trainer's Notes

Module 7: ORGANIZATIONAL STRATEGIES

This module can be implemented in several ways, depending on the background and experience of the participants. The participants should be required to read the content of the lecture/discussion before the session. During the session, if, for example, the participants include several experienced research managers, the session could be conducted as a free-flowing discussion among participants with the module coordinator serving as the chairperson using the subheadings in the module as the agenda. Views and experiences of participants on each of the issues raised in the module can be discussed. On the other hand, if most participants are relatively inexperienced, it may be preferable to briefly present the major issues illustrating each with examples from either the participants or the coordinator.

Individual work

The exercise for individual work is presented as a series of multiple-choice questions intended to stimulate each participant to review the situation in his or her own country. If there is more than one participant from a country, they could work together. This exercise is intended to enable them to apply the concepts that have been presented in the module to real-life situations and identify issues on which they need clarification or elaboration that can be obtained from fellow participants during the group work. The individual responses to the questions will not be further discussed during this workshop, but may be used by participants in preparing their plans of action.

Group work

During the first part of the group work, participants should be encouraged to clarify, share examples from their own countries, and elaborate on particular issues raised by other members of the group. Time will not permit a comprehensive treatment of all issues. Therefore, the group's facilitator should attempt to obtain a quick overview of the issues that are forthcoming and guide the group so that sufficient attention is given to selected issues under each subheading.

Plenary session

In guiding the plenary session, the module coordinator should be alert to issues that have not been sufficiently emphasized during the lecture/discussion and stimulate further examination. Several participants are likely to have personal experiences or strong views on various issues. The issues can be "brought to life" by encouraging a discussion on such topics.

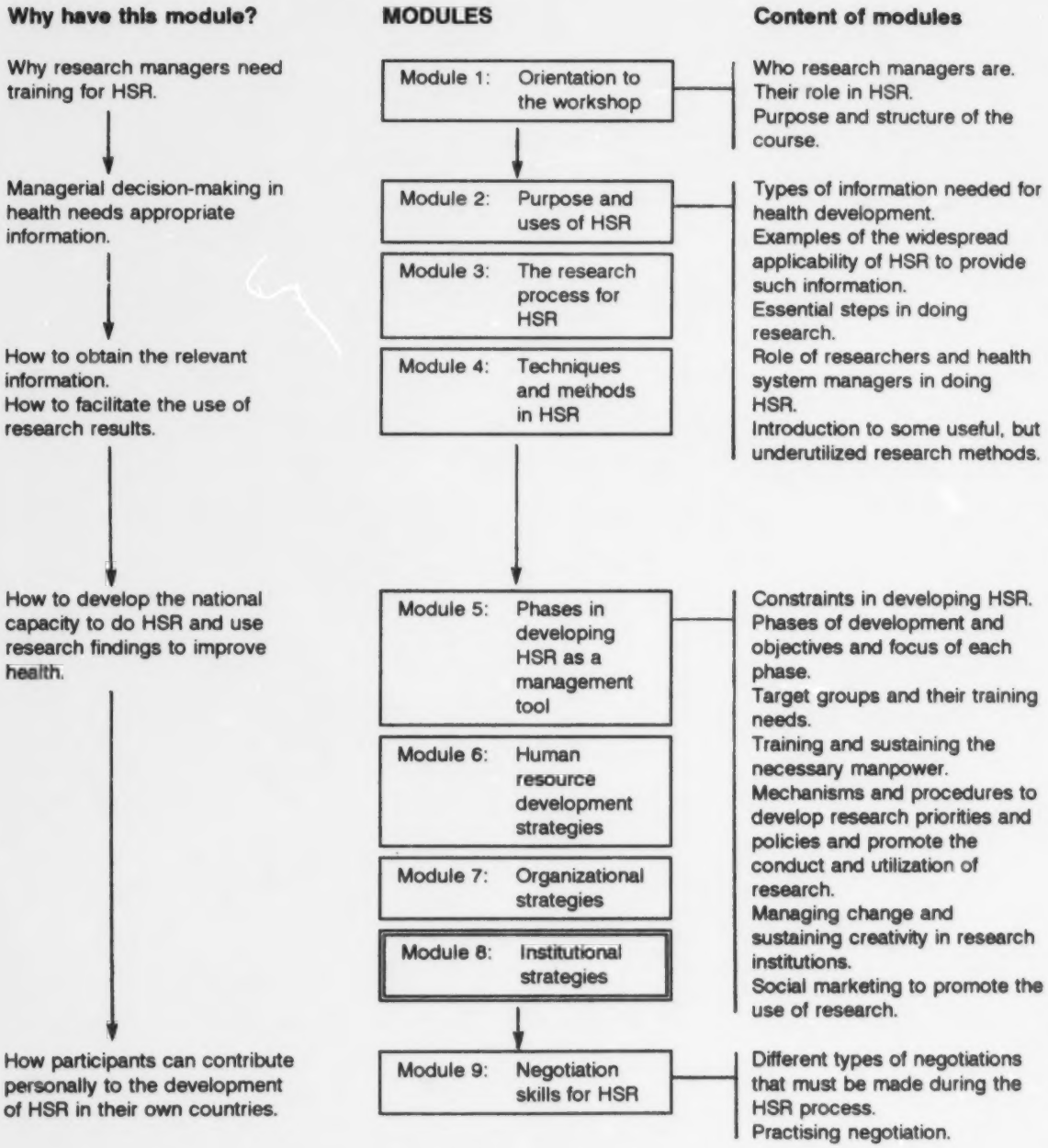
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 8:

INSTITUTIONAL STRATEGIES

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Module 3: The research process for HSR
Module 4: Techniques and methods in HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
Introduction to some useful, but underutilized research methods.
How to obtain the relevant information.
How to facilitate the use of research results.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Module 6: Human resource development strategies
Module 7: Organizational strategies
Module 8: Institutional strategies
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Training and sustaining the necessary manpower.
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 8: INSTITUTIONAL STRATEGIES

OBJECTIVES

At the end of this module, you should be able to:

1. **Use social marketing to promote the use of HSR.**
2. **Understand the process of organizational change.**
3. **Become a successful agent of change.**
4. **Manage internal organizational change and conflict following the decision to "install" HSR in the institution.**
5. **Encourage innovation and creativity.**

CONTENTS

Social marketing of research: promoting utilization of results (lecture/discussion)

Individual exercise: Integrating social marketing into the plan of action

Managing change within a research institution (lecture/discussion)

Individual exercise: "Selling" the plan of action within the research institution

Group exercise: Discussion of the plans of action

MATERIALS

Handout 8.1: Individual and group exercises

SOCIAL MARKETING OF RESEARCH: PROMOTING UTILIZATION OF RESULTS (lecture/discussion)

As has been established in earlier modules, research in health and related fields is not conducted for its own sake, but for the purpose of contributing to health development in addition to expanding the body of knowledge. Therefore, it is important that the findings from such research be utilized. As the manager of a research institute, it is part of your responsibility to promote the utilization of the research results that are the output or "product" of your institution. The application of the principles of social marketing will assist in this endeavour.

> **The research manager must be able to apply techniques of social marketing to promote the use of research findings.**

To "market" the research findings of your institution, you will need to establish relations with potential users of the results. This may be viewed as a realization of the external social function of your institution.

Barriers to the use of social marketing for research

The concept of using social marketing for research is likely to meet with opposition for three main reasons:

- Professional attitudes (i.e., due to the academic emphasis in the research institute, there is a resistance to doing more than just producing knowledge);
- The viewpoint that a research institute is a non-profit organization and, most importantly, there is no clear link between producers and consumers of research; and
- Lack of clarity about who will benefit from the improvements arising from the research and how they could be reached.

There is a need for you to recognize these constraints and to develop a plan to deal with them.

Elements of social marketing

Marketing in a research institute has four major elements:

- **Analyzing** your target group and your "product";
- **Planning** the development of your "product," defining the "value" of your product, distributing your product, and its promotion;
- **Organizing** strategies that link researchers with potential research users; and
- **Controlling** the demand for your product.

It is important to note that these four components are complementary.

Analysis of the target group and the product

You should realize as a manager of your institute that there are diverse parties interested in the research results produced by your organization. They include potential funding agencies (e.g., the government, various foundations, WHO, etc.), potential research users (e.g., politicians, administrators, hospitals), and organizations and individuals who will receive remuneration as a result of the research (e.g., management, researchers and interviewers).

There is need for you as manager to devise appropriate strategies for dealing with each of these interested parties. For example, if you want to become familiar with the concerns of potential research users you may need to get yourself invited to serve on policymaking bodies or attend planning and policy development conferences, so that you become aware of the concerns and issues in the health system for which research is likely to be required. Similarly, you need strategies to enable you and other key members of your institution to become familiar with the policies and concerns of funding agencies, mid-level managers in the health-care system (i.e., district level, hospital level, etc.), academic or training institutions, community leaders, etc.

Planning the marketing of your product

The question then arises: how do you market your institute's "product"? It is by the manipulation of the four Ps — **product, place, promotion**, and **price** — as in the marketing of commercial products.

- The **product**, in your case, is what the consumers pay for or why the government (or a foundation) gives your organization a grant. You, as the research manager, need to know whether the product is information acquired through research, different methodologies involved in the research, the policy implications of the research, or the recommendations arising from the research.

- **Place** is where you make your institute's products available, for example, during a meeting with officials.

- **Promotion** is how your institution presents its research to the outside world - whether by advertising, promotional visits, flyers, prestigious publications, or meetings.

- **Price** is the result of the transaction, that is, how much users have to pay in cash, time, or energy for your product or how much you charge.

Your institute must have a marketing policy, because it will need to deal with users over a long period, not only once. The need to develop a marketing policy means that, as a manager, you have to consider issues such as the following:

- **Product:** What kind of products should you produce? Should you concentrate in certain subject areas? Should you do only large-scale surveys or smaller studies as well? Should you only report results or also give policy advice?

- **Price:** Taking into consideration the characteristics of the target groups and their willingness and ability to pay in terms of time, energy, etc., you have to invest in making your product attractive and available to them. If you are dealing with an uninitiated or disinterested audience, your price will be in competition with other demands on their time, interest, etc. For example, a fellow researcher would be prepared to invest in a literature search to access research information but a policymaker may expect to be provided with the information through a telephone call.

- **Promotion:** Should it be done through official letters or should it be done by informal contacts? Should there be press statements and television interviews? Should there be conferences to disseminate results and promote their application? How should these be organized and what type of support materials will be needed? Pictorial? Graphic?

- **Distribution:** Should there be just one report for the official contractors? Should there be other versions of the report for different audiences? Should you provide feedback or information to those from whom you collected data?

Organizing strategies to link researchers with users

To successfully market your product, you need to consider whether the research information reaches the right people. If it does not, you need to consider new strategies for increasing communication between your researchers and potential users.

Controlling demand for your product

At some time, it may become necessary for you as manager to control the demand for your institute's product. We, therefore, conclude this first part of the module by considering alternative types of demand situations and what you should do in each situation to control demand.

- **Negative demand** means that people are not interested in your institute's research and tend to avoid your organization. The answer to this type of demand situation is to do **return marketing**, i.e., present a new perspective, getting people to understand that research is not a threat but a tool, involving community members and other potential users in generating ideas for research so they will become more interested in its results.

- **A no demand situation** arises if people do not know what your institute offers and thus are indifferent to its products. In this case, the best strategy is to do **stimulation marketing**, e.g., make them aware of their research needs and inform them of how the services of your institute can help them meet these needs.

- **Latent demand** is a situation where people have research needs, but the product they want is not available in your institute due to, say, financial constraints. The answer to this situation is **development marketing**, i.e., your institute should identify what the people are demanding and try to find new ways to offer it.

- **Decreasing demand** occurs if people have already used your services or have found less costly alternatives. In this case, your institute should engage in **re-marketing** by up-dating earlier work or by changing your offer and starting again.

- **Irregular demand** arises when demand changes over time. Engage in **synchro-marketing** by controlling demand through price changes or by convincing research users to plan ahead and sponsor research **now.**

- **A stable demand situation** arises when your institute has just enough research projects on hand. In this case, it is ideal to do **continuation marketing** by continuing to offer a good and efficient product. Your institute should, however, be aware of possible changes in demand and potential competition in the market (e.g., students doing research work for free to earn their degrees).

- **An over-demand situation** arises when people want more research than your institute has the capacity to do. In this case, you should do **de-marketing**, which could involve frankly informing some of your customers that you have limited resources. You may need to selectively discourage some customers.

INDIVIDUAL EXERCISE: Integrating social marketing into individual plans of action

Pass out Handout 8.1 and ask the participants to complete the first individual exercise. Taking into consideration the political, social, and economic environment in which their organizations are embedded, they should plan how they would "market" the research "products" of their institutions and incorporate these ideas into their plans of action.

MANAGING CHANGE WITHIN A RESEARCH INSTITUTION (lecture/discussion)

In Module 5, several constraints to the development of HSR were described and the need for strategies to deal with these constraints were discussed. These strategies were categorized at the "macro" level (i.e., national, provincial, interagency, or intersectoral) and those at the "micro" level (i.e., within research and academic institutions). The former category (Organizational strategies) was dealt with in Module 7; the latter category (Institutional strategies) is the topic of this discussion.

In Modules 5, 6, and 7 some of the implications of introducing HSR into research or academic institutions were discussed. It may be necessary to realign research policies with national policies, developing mechanisms for monitoring the quality and types of research. The introduction of HSR into institutions that have had a primarily biomedical, clinical, sociological, or economic research focus or have been devoted to teaching and the provision of service (as in the case of university teaching hospitals) may generate internal tensions. To deal successfully with these issues, the research manager must be able to manage change within the institution.

To MANAGE CHANGE, a research manager must:

- **Understand the process to bring about change within the institution;**
- **Regard himself as a change agent; and**
- **Be able to manage the change process.**

Research is a creative activity and, to assist a research institution to produce good quality research, a research manager must be able to encourage and support creativity among his staff.

A research manager must STIMULATE and SUPPORT CREATIVITY and INNOVATION.

As a manager of a research institute, once you have become an "HSR convert," you need to plan how to effect change both within and outside your institution in support of HSR. To do this successfully, you need to understand the process for bringing about change, the four levels of change in people that will be required, and the general approaches to initiating change in an institution. These issues are briefly discussed, in turn.

The process of change

The **process** of bringing about change has five phases:

- The first phase is for you, as the manager, to get others to recognize the need for a change. This is best done, as we have seen in an earlier module, by planning and achieving consensus among the senior researchers in your institute. By ensuring that the senior researchers are exposed to workshops, seminars, etc., similar to the type that "converted" you to HSR, you will not only succeed in consensus building, you will also be able to develop a "critical mass" of potential supporters with the institution.

- The second phase of the process of bringing about change will involve mobilizing the commitment of the critical mass.

- If you succeed in doing this, then it is easy to accomplish the third phase: building a shared vision. While at the beginning of the process you were alone in your dreams about HSR and its place in your organization, at the end of the third phase of the change process, you are no longer alone. You now have others who share the same vision with you.

- At this stage, you should diagnose the current status of HSR within the organization.

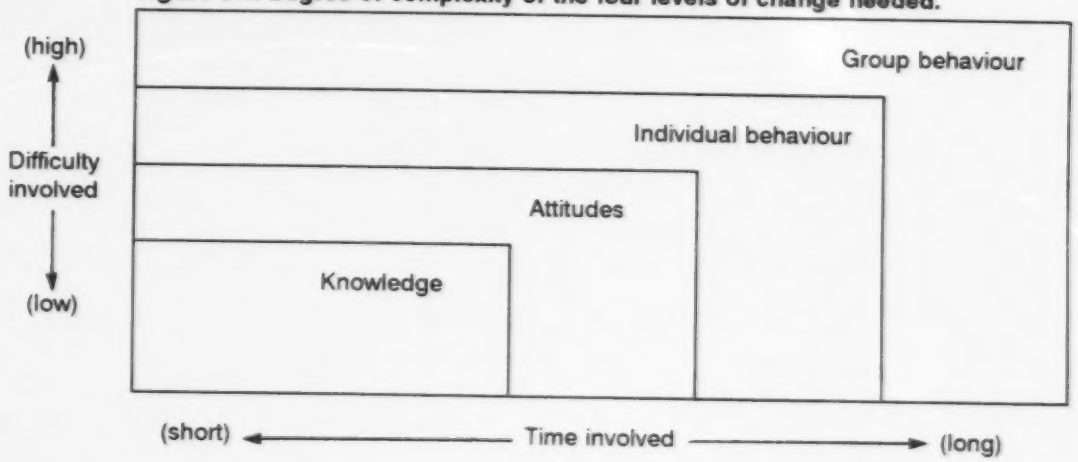
- Finally, you need to determine how to move successfully toward the shared vision. It is clear from the foregoing that the process of bringing about change should **not be revolutionary**, but rather **evolutionary**.

There are four **levels of change in people** that are needed within your organization to bring about change successfully. They are:

- A change in knowledge of HSR;
- A change in attitude toward HSR;
- A change in individual behaviour toward HSR; and
- A change in group behaviour toward HSR.

These levels are progressively more complex (i.e., while it is relatively easy to effect a change in people's knowledge, it is relatively difficult to effect a change in group behaviour). Figure 1 summarizes the degree of complexity of effecting change at the four levels.

Figure 8.1. Degree of complexity of the four levels of change needed.



Initiating change

There are **three approaches to initiating organizational change**. These approaches focus on individuals, the organizational structure and systems, and the organizational climate and interpersonal style. Table 8.1 illustrates these three approaches and provides examples of their application to research institutions. It is important for you as research manager to realize the importance of each of these approaches. It is rare to effect organizational change without using all three of the approaches.

Table 8.1. Examples of three general approaches for initiating organizational change.

Approaches for initiating change in:	Typical intervention techniques	Intended immediate outcome	Examples of application of the technique
Individuals	Education, training, socialization	Improve skill levels, attitudes, and motivation of individuals.	1. Send senior researchers to attend consultative meetings with policymakers to determine research priorities. 2. Introduce concepts of HSR into research courses. 3. Nominate junior staff from community-oriented disciplines to attend HSR courses.
Organizational structures and systems	Modification of current organizational practices, procedures, and policies that affect what people do at work	Create conditions to elicit and reward behaviour that facilitates achievement of organizational goals.	1. Review research priorities of the institution and strengthen the emphasis on HSR. 2. Establish procedures to review projects and monitor the progress in implementation. 3. Establish interdivisional or multidisciplinary task forces or committees to develop policies and procedures. 4. Link research with existing service functions (e.g., research to improve resource management in university hospitals).

Approaches for initiating change in:	Typical intervention techniques	Intended immediate outcome	Examples of application of the technique
Organizational climate and interpersonal style	Experimental techniques aimed at increasing members' awareness of the social determinants of their behaviour and helping them learn new ways of reacting and relating to each other within the organizational context	Create a system-wide climate characterized by high interpersonal trust and openness; reduce dysfunctional consequence of excessive social conflict and competitive-ness.	1. Organize a weekend course that introduces key issues related to organizational behaviour through case studies, management games, etc., that are relevant to the research institution. 2. Introduce HSR gradually, starting with "entry points" where it is most likely to be perceived as relevant and useful. Encourage discussion and accept criticism and new ideas.

The research manager as a change agent in the institution

Bringing about change in the organization requires change agents, i.e., people to initiate the change. There are two general types of change agents: external and internal. External change agents are usually consultants and are experts in the specific area of organization change. Internal change agents, on the other hand, come from existing personnel and may be from any level or department, depending upon the type of change needed.

It is important for you to realize that as the manager of your research institute not only are you a change agent, but **change should start with you**. There are **three aspects of your behaviour** that are **relevant to the management of change**, in this case the introduction or development of HSR: learning, power, and influence.

The factor that is most likely to affect your ability to change is your **capacity to learn**. The learning process is, therefore, a key to managing change in yourself and in your organization. There are four stages of learning and you should know them as a manager. First is data collection (in this context, learning more about HSR). The second stage is reflection and analysis of the data collected (reflecting on and analyzing what you know about HSR). The third stage is vision and concept building (developing a plan of action for HSR in your organization). The fourth stage is the action stage (implementing the plan of action). It is important to underscore the point that if you as the manager of your research institute are not an effective learner, then your organization is not likely to be able to learn.

The second relevant aspect of your behaviour is your **power**. In change situations, there is always need to influence key actors once the targets for change have been identified. As manager, there are at least five potential sources of power available to you to effect change: coercive power (use of threats and punishments); expert power (special knowledge that others need, but do not possess); role power (attributed to the position you hold and the authority that goes with it); reward power; and connection power. Different types of power work under different situations. You know your organization very well and should, therefore, be in a position to determine the source or combination of sources of power that you should use as a change agent.

The third relevant aspect of your behaviour relates to the way you exert **influence** over other members of the organization. You can exert influence in a number of ways: assertive persuasion (i.e., use of the power of logic, facts, and opinions to persuade others); reward and punishment; promotion of a common vision of what the future of the organization could be (i.e., by appealing to people's hopes, values, and aspirations); and encouraging participation and trust.

An effective manager knows how and when to use any one or more of these approaches after taking into consideration individual personalities, various interest groups and their alignments, the hopes and aspirations of various staff members, and pressures and constraints within and outside the institution.

Managing change within your institution

Ingredients for managing change include:

- **A new strategic vision translated into a plan of action;**
- **New organizational skills; and**
- **The commitment of key people in the institution.**

There are certain critical ingredients for successful managing of the organizational change that will be necessary for integrating HSR into your institution.

- **A new strategic vision** translated into detailed operating strategies (i.e., a plan of action). During this workshop you are developing the beginnings of this plan. It will need to be further developed and elaborated when you return to your own environment and are able to obtain input from key people. It is useful to regard the plan as flexible and developmental in nature so that you can adapt, modify, or expand it when opportunities present themselves or unforeseen constraints and changes arise.

- **New organizational skills** to make the plan work. This module is intended to introduce a number of key concepts and issues from management science that have practical implications in managing your institution. There are many well-written publications on these topics that can serve to further learning in this area.

- **Commitment of key people** in the institution is essential for achieving your new strategic vision. This issue will be further elaborated in this section of the module.

When HSR is introduced, the responses of the key people in your organization may be attitudinal, behavioural, or both.

Attitudinal responses may be any of the following:

- Enthusiasm — positive feelings toward change;
- Neutrality — no strong feelings toward change; or
- Hostility — negative feelings toward change.

Behavioural responses may include:

- Compliance — employees implementing change; and
- Resistance — employees attempting to prevent change.

The two categories of responses, therefore, provide six possible scenarios that you may be faced with as manager of your organization. These are depicted in Table 8.2.

Table 8.2. Responses to a change in an organization.

Behavioural response	Attitudinal response		
	Enthusiasm	Neutrality	Hostility
Compliance	*	*	+
Resistance	++	++	*

Notes on the table: *, this is more or less the logical expectation; +, Could result if coercion is used; ++, Could arise when the individual has second thoughts about the change.

Reasons for resistance

The possible causes of resistance include:

1. Misconceptions about HSR based on misinformation and fear of the unknown. HSR is likely to be viewed as a new and rival discipline rather than as a marriage and development of several existing disciplines.

2. Threat to core skills and competence. HSR requires researchers to learn new skills to be able to work in multidisciplinary teams, understanding and appreciating the concepts and techniques of sister disciplines. It also requires researchers to acquire competence in understanding and communicating with health managers and the community. Such demands could be threatening to researchers who have other highly developed and valuable skills, but little competence in these particular areas.

3. No perceived benefit. HSR may appear irrelevant to researchers from disciplines that are not community or health policy oriented.

4. Threat to power base, threat to status and stronger group norms. This can become an issue if it is perceived that the changes associated with concepts of HSR will strengthen some groups within the institute and weaken others.

5. Historical factors within the institution. Some institutions have long established and highly ingrained traditions and there is thus strong resistance to attempts to innovate, to trying new approaches in work procedures, etc. It is more difficult to introduce change in such institutions.

6. Poor relationships, low level of trust within the organization, reluctance to experiment. These are factors that would make it difficult to introduce the changes associated with HSR, because these changes require a great deal of collaboration and interaction to explore potentials within the institution, to set up new working relationships, to bring together professionals with different types of research skills who have not interacted before, etc.

Approaches to minimizing resistance

Potential resistance can be reduced if the following principles are kept in mind:

- The change should have the full support and commitment of most of the organization's members.
- The change will be most acceptable if it is a group decision based on a group diagnosis.
- It helps if the change will not increase the workload and it helps further if it will actually reduce it.
- The change is more likely to be accepted if it benefits most participants and is in harmony with the values and ideals of participants.
- It helps if economic incentives, which can be embedded in career structure, come along with the change, especially if resistance is likely to arise mainly on economic grounds.

To apply these principles, you may have to use many of the following strategies in selecting the appropriate approach and using it judiciously.

1. Education and communication
   Information about HSR should be presented in a simple fashion taking into consideration the interests and viewpoints of the particular audience. Biomedical researchers may be most interested in the issue of the use of their research results and, therefore, this would be a suitable entry point. Feelings of fear and threat can be minimized by emphasizing the similarities between HSR and the particular research disciplines that are being addressed.

2. Participation
   The involvement of opinion leaders in discussing, developing, and implementing strategies is a useful approach. They could be involved, for example, in reviewing institutional policies, in reviewing projects, and monitoring progress in accordance to predetermined criteria.

3. Training
   Providing training for the new skills that are expected is an important strategy, but to be effective, the content and teaching methods must be innovative, interesting, and relevant, considering the background and experience of the prospective participants.

4. Use of power
   Authority should be used mainly when change must be implemented quickly; when the commitment of those affected by the change is not necessary for implementation; and when little resistance is expected.

5. Negotiation
   Negotiation may be necessary if the change could bring about results that are not in the mutual interest of the various parties.

6. Manipulation
   Manipulation may be used when it is possible to consciously structure events so that others behave in the desired way.

If you are to manage successfully the process of change resulting from the introduction of HSR into your research institute, you will need to help organization members face change; communicate more effectively than you ever have before; ensure early involvement of the organization members; turn the perception of **threat** to **opportunity**; work in getting commitment; and encourage innovation and creativity.

Innovation and creativity

In the remaining part of this section, we shall briefly consider how to encourage the innovation and creativity that are so important in research. While **creativity** is the production of novel and appropriate ideas by individuals or small groups, **innovation** is the successful implementation of creative ideas within an organization. As manager of a research institute, you will need to understand the components of individual creativity, the factors that can stifle it, and the factors that can enhance it.

The components of individual creativity include: expertise, creativity skills, and intrinsic/extrinsic task motivation. Expertise is everything a person **knows** or **can do** in the domain of his or her endeavour. Creativity skills include a style of thinking and working that is conducive to creativity in any domain, e.g., a flexible cognitive approach; an energetic, persistent work style; risk taking and independence. Intrinsic task motivation is motivation due to interest, enjoyment, satisfaction, and the challenge of the work itself, while extrinsic task motivation is what makes one perform to achieve external goals. Both extrinsic and intrinsic task motivation have positive functions. With extrinsic motivation, work gets done on time, technical quality is maintained, and external needs are satisfied; with intrinsic motivation, work is self-monitored, exploration can be encouraged, internal needs are satisfied, and creativity is enhanced.

As manager of a research institute, you can stimulate creativity and innovation by giving organization members freedom in their work, while giving clear directions by appropriately matching tasks with skills and interests, by encouraging new ideas, by fostering cooperation and collaboration across various levels and divisions of the organization, by prizing innovation, and by not strongly penalizing failure.

You should avoid creating obstacles to creativity and innovation through inappropriate reward systems, excessive "red tape," lack of regard for innovation, lack of freedom and control over one's work and ideas, organizational disinterestedness, poor project management, inappropriate or inequitable evaluation and feedback systems, insufficient resources for members to work with, or a win-lose type of competitive situation. By taking the right steps to foster creativity and innovation, you, as an agent of change, can successfully manage the change in your organization that is necessary for the successful introduction of HSR.

INDIVIDUAL EXERCISE: "Selling" the plan of action within the research institution

Ask the participants to follow the instructions for the second exercise in Handout 8.1, working individually to consider the constraints they face and how they would "sell" or promote their plans of action in their organizations. They should then incorporate their ideas into their plans.

GROUP EXERCISE: Discussion of the plans of action

Ask the participants to meet in small groups and follow the instructions for the third exercise in Handout 8.1, discussing the Plans of Action prepared by various group members, their feasibility, and what assistance in implementation can be rendered by various agencies.

Handout 8.1. Individual and group exercises

INDIVIDUAL EXERCISE: Integrating social marketing into individual plans of action

Taking into consideration the political, social, and economic environment of your organization, plan how you would "market" the research "products" of your institution. Incorporate these ideas into your plan of action.

INDIVIDUAL EXERCISE: "Selling" the plan of action within the research institution

Taking into consideration the constraints in your organization, decide how you will "sell" your plan of action within your organization. Incorporate your ideas into your plan.

GROUP EXERCISE: Discussion of the plans of action

Now that you have completed the various components of your individual plan of action, join others in your group to discuss the plan. The discussion should focus on the feasibility of your plan and what assistance can be rendered by other agencies for its implementation.

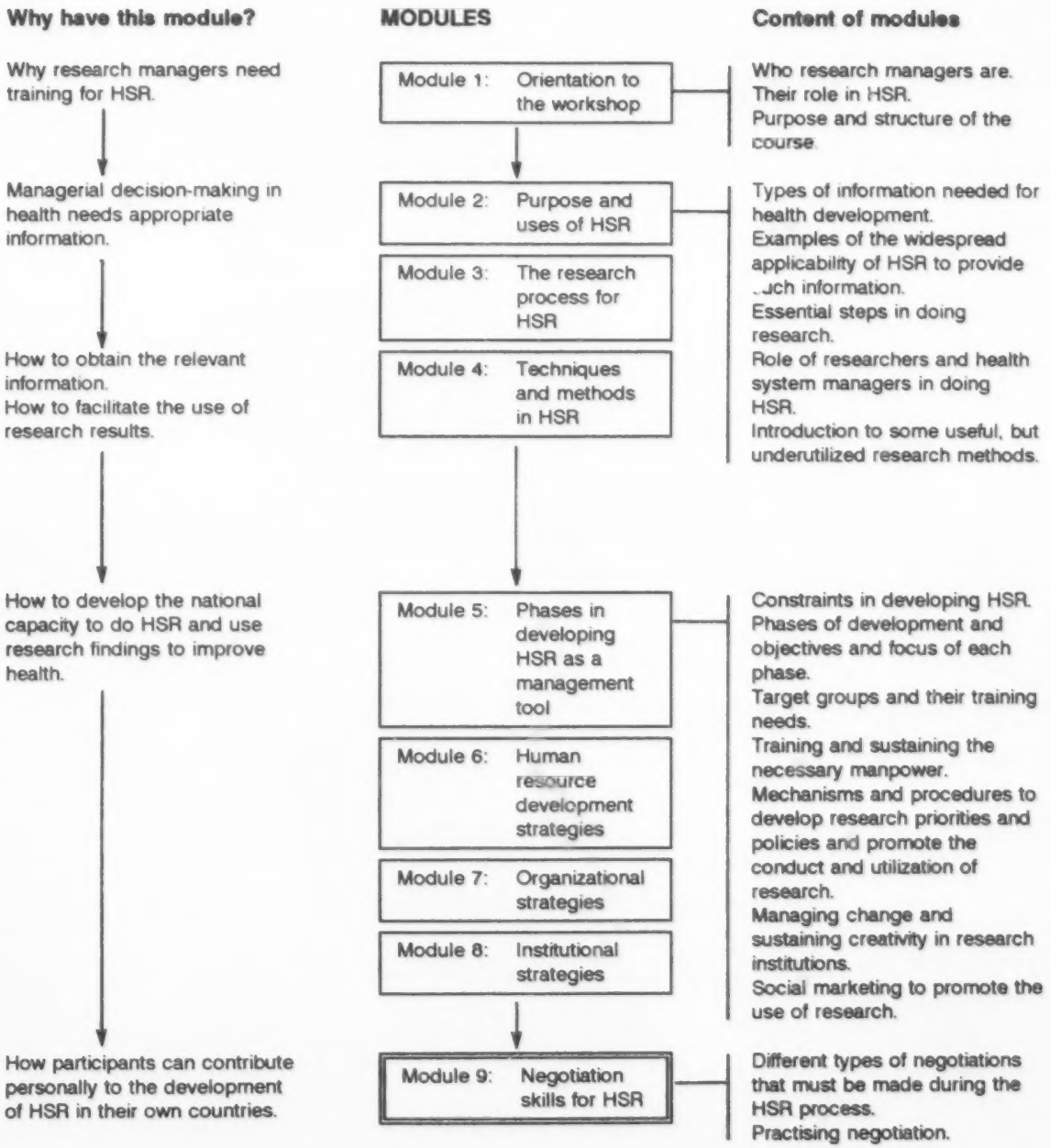
Health Systems Research Training Series

Volume 4: Managing Health Systems Research

Module 9:

NEGOTIATION SKILLS FOR HSR

Rationale and content of the modules in this volume


Why have this module?
MODULES
Content of modules
Why research managers need training for HSR.
Module 1: Orientation to the workshop
Who research managers are.
Their role in HSR.
Purpose and structure of the course.
Managerial decision-making in health needs appropriate information.
Module 2: Purpose and uses of HSR
Types of information needed for health development.
Examples of the widespread applicability of HSR to provide such information.
Module 3: The research process for HSR
Essential steps in doing research.
Role of researchers and health system managers in doing HSR.
How to obtain the relevant information.
How to facilitate the use of research results.
Module 4: Techniques and methods in HSR
Introduction to some useful, but underutilized research methods.
How to develop the national capacity to do HSR and use research findings to improve health.
Module 5: Phases in developing HSR as a management tool
Constraints in developing HSR.
Phases of development and objectives and focus of each phase.
Target groups and their training needs.
Module 6: Human resource development strategies
Training and sustaining the necessary manpower.
Module 7: Organizational strategies
Mechanisms and procedures to develop research priorities and policies and promote the conduct and utilization of research.
Module 8: Institutional strategies
Managing change and sustaining creativity in research institutions.
Social marketing to promote the use of research.
How participants can contribute personally to the development of HSR in their own countries.
Module 9: Negotiation skills for HSR
Different types of negotiations that must be made during the HSR process.
Practising negotiation.

Module 9: NEGOTIATION SKILLS FOR HSR

OBJECTIVES

At the end of this module, you should be able to:

1. **Recognize that negotiation abilities are important for health systems researchers.**
2. **Recognize situations that require the researcher to negotiate with the manager during the research process.**
3. **Identify and apply the negotiation skills that are required of a health systems researcher to conduct research successfully.**

CONTENT

Reading assignment for participants before presentation of the module:

Handout 9.1: Behavioural challenges for health systems researchers

Introduction to negotiation abilities required for HSR (lecture/discussion)

Role-playing session

Plenary session: Discussion of the role-playing

MATERIALS

Handout 9.1: Behaviour challenges for health systems researchers (to be handed out at least 24 hours before the module is presented)

Handout 9.2: Instructions for role-players

Trainer's Notes

INTRODUCTION TO NEGOTIATION ABILITIES REQUIRED FOR HSR (lecture/discussion)

It will be evident from previous modules that the nature of HSR requires health systems researchers to interact with and actively involve several types of non-researchers, as well as other researchers in the course of a project. Such people have different perceptions, interests, attitudes, levels of knowledge, skills, and working styles.

Non-researchers who are involved in the research process include:

- Health systems managers (at all levels);
- Health-care providers; and
- Community members.

In addition, interaction with researchers from other disciplines will be needed.

Interaction with non-researchers will occur during various phases of the research process, including:

- Problem identification;
- Problem analysis and definition;
- Implementation of research in multidisciplinary teams; and
- Reporting of results, conclusions, and recommendations.[1]

To be able to negotiate effectively during each of these phases of interaction, the health systems researcher needs to:

- Understand the attitudes, feelings, and resultant behaviour of the person with whom interaction is taking place;
- Recognize his or her (the researcher's) own attitudes and feelings;
- Recognize the environmental constraints, pressures, and incentives that affect the negotiators; and
- Modify his or her (the researcher's) behaviour so as to influence the other person's behaviour in the desired direction.

To negotiate effectively you must:

- **Understand yourself;**
- **Understand the person you are negotiating with;**
- **Recognize environmental pressures; and**
- **Modify your behaviour to influence the other person.**

---

[1] Summarized from Hassouna, W.A. 1988. *Behavioural prerequisites for health systems researchers.* Presented at the Interregional training workshop on health systems research sponsored by the Danish International Development Agency, Ministry of Health, Malaysia, and the World Health Organization in August 1988, Kuala Lumpur.

Discuss the major issues raised in Handout 9.1, Behavioural challenges for health systems researchers, by W. Hassouna.

ROLE-PLAYING SESSION

Select and brief the participants who will take part in the five plays at least a day before the scenarios are presented. Use the Trainer's Notes found at the end of the module for guidance in the selection and briefing process. Give the actors Handouts 9.1 and 9.2 to read and allow them plenty of time to confer with their partners before the session begins.

Prepare for and conduct the plays, following the instructions in Trainer's Notes at the end of the module. Remind participants who will not take part in the plays to be sure to read Handout 9.1 before Module 9 is presented, but don't give them Handout 9.2, Instructions for role-players.

PLENARY SESSION: Discussion of the role-playing

Hold a plenary session to discuss the plays and the issues they illustrate, following the guidelines in Trainer's Notes.

Handout 9.1. Behavioural challenges for health systems researchers[2]

Overview

The first behavioural challenge that health systems researchers face is due to the participatory nature of HSR, which is a logical consequence of its problem-solving and action-oriented nature. During the various phases of the research process, the health systems researcher should cooperate with and actively involve various categories of non-researchers and researchers. Naturally these people have different perceptions, interests, attitudes, levels of knowledge, skills, and working styles.

Among non-researchers, community leaders and health systems managers at all levels of decision-making (i.e. policy, strategy, planning implementation and evaluation) play a crucial role in the research process. Other non-researchers in the health system who should invariably be involved in the research process are health providers at all levels of health services as well as the population to be served by the system. Because of the multisectoral nature of HSR, decision-makers in health-related sectors should be involved in the HSR process whenever possible.

The fact that HSR is multidisciplinary requires the health systems researcher to cooperate with researchers from a wide variety of disciplines.

The second type of behavioural challenge results from the cultural sensitivity needed by health systems researchers if they are to develop appropriate and culturally acceptable solutions. The understanding, respect, and appreciation of the beliefs and social and cultural values of the society within which the health system being studied operates are of utmost importance to a health systems researcher. Failure to pay adequate attention to this behavioural challenge is not restricted to expatriate researchers, but can be a problem for national researchers too.

The third type of behavioural challenge results from the sensitivity of HSR to time and cost. The appreciation of health systems researchers of the constraints under which health systems managers and decision-makers operate is crucial for implementation of recommended solution(s). The well-known saying that decision-makers like to have answers to their problems yesterday, i.e. before they even ask the questions, and at the cheapest possible cost is not completely devoid of truth. This challenge requires health systems researchers to be in as close communication as possible with decision-makers, to familiarize themselves with the main health system problems with which decision-makers are concerned to enable them to respond to needs in the quickest time possible.

In addition, health systems researchers should be willing to use quick and clean methods whenever possible without violation of scientific principles. The tendency of many researchers to believe that quick methods are by definition not scientific presents a real obstacle to successful HSR.

---

[2] This paper was prepared by W. Hassouna for the First interregional workshop on health systems research sponsored by DANIDA/WHO/Ministry of Health, Malaysia, in Kuala Lumpur in August 1988.

Behavioural challenges in the different phases of the HSR process

The problem identification phase

In HSR, identification of problems is expected to emanate from users and managers of health systems and/or the health systems researcher. The recognition of a problem by the manager is crucial to the subsequent utilization of research results, because he or she is the person who will decide whether to implement the suggested solution. This does not mean that researchers and users of health systems do not have a role in this phase, but the effectiveness of their role is highly dependent on their ability to motivate and convince the managers to recognize existing problems and to seek solutions through HSR.

Expected attitudes and behaviours of managers during problem identification

During this phase, one can visualize managers with the following four categories of attitudes:

1. Inability to recognize existing problems and a strong belief that the present situation is the best possible or even ideal.

2. Denial of the existence of problems in spite of knowing that they exist.

3. Recognition of existing problems, but reluctance to use HSR to find appropriate solutions.

4. Recognition of problems and willingness to use HSR to find appropriate solutions.

Although the fourth category is ideal for health systems researchers, it is unfortunately the one that is most rarely found. Managers in the first category used to be common, but are now becoming fewer compared to those in the second and third categories, although belief in the status quo is still prevalent in many countries.

A relatively high percentage of health systems managers in developing countries are in the second category. The third category of managers is fairly common as well. Each of the first three categories presents a real behavioural challenge to the health systems researcher and requires its own approach.

For managers in the first category, the health systems researcher must play the role of educator and motivator. The researcher will require repeated contacts and discussions with the manager, giving examples of problems seen preferably from the health system of the same country or similar countries, as well as solutions reached through research. The magic words for this approach are "low key," "two-way communication," and "mutual learning."

For managers in the second category, the researcher's role is much more difficult. The researcher must use a tactful approach to alleviate the fear the manager has of speaking about the existing problems and to convince him or her that the existence of problems does not necessarily reflect on his or her personality or managerial abilities. This process usually takes a relatively long time and the success of the researcher depends primarily on his or her attitude toward managers and communication skills.

For managers who recognize problems but resist using HSR to help solve them, the researcher should concentrate on trying to convince the manager of the merits of using HSR compared to a trial-and-error approach based on intuition, personal experience, or adoption of solutions used in other countries without adaptation. Managers in this category usually raise a variety of questions such as:

- Why do I have to use research when I already know how to solve these problems?
- Why can't I depend on my past experience in solving those problems? I have done this before and always succeeded.
- Could research provide me with appropriate solutions when I really need them? How much time will it take before I get the answers?
- Doing research is costly and, as you know, we have almost no budget for research. How much is your research going to cost me?
- How can you guarantee that you will be able to come up with practical, feasible, and affordable solutions within the proper time?
- If you do the research, will you agree not to publish the final report except after my approval?

Problem definition phase

Although the health systems researcher plays the main role in this phase because of his or her technical skills, the role of the manager is also important. In practical terms, this is the phase in which the manager should start participating very actively in the research process. The manager's participation depends on several factors:

- The researcher's perception of the manager's abilities to participate in technical matters. Unfortunately, many researchers view managers as ignorant, naive, rigid, and stereotyped. Obviously, such an attitude will do nothing to contribute to effective participatory research.
- The level of the manager's familiarity with the nature, concepts, and methods of research that greatly affect his motivation, confidence, and ability to participate.
- The nature and magnitude of incentives that the manager expects from participating in the research, compared to incentives for his participation in other activities such as training.
- The time that the manager can allocate for participation in the research process, which is highly determined by his or her workload as well as the level of satisfaction he or she gets from time allocated to other activities.

Based on the perceptions and attitudes of the health systems researcher as well as the willingness and ability of the managers to participate in the research process, the health systems researcher can choose to behave in one of the following ways:

1. Actively motivate the manager to participate in the definition of the problem and formulation of appropriate researchable question(s).

This requires the researcher to communicate the essence of the process to the manager in plain understandable language without loading the description with unnecessary jargon which may inhibit the willingness of the manager to participate. In other words, the researcher should deal with the manager as an equal partner and avoid any words or actions that may give the manager a feeling of a superior-inferior relationship.

2. Refuse to involve the manager in the research process directly or indirectly.

3. Use the manager as a quick, inexpensive source of information and benefit from his or her authority in facilitating the logistics of the research process.

The problem solving phase

During this phase, the main behavioural challenge to the health systems researcher usually results from the multisectoral and multidisciplinary nature of HSR. The ability to involve other relevant sectors in this phase is usually dealt with through the health systems manager, and its outcome strongly depends on his or her relationship with these other sectors. In this endeavour, the researcher provides the manager with the technical support required to show the other relevant sectors the kinds of benefits they can gain from their participation, as well as to discuss the nature and scope of their participation.

During this phase, the participation of managers is crucial in developing research instruments (e.g., questionnaires) that are designed to collect information by interviewing individuals. Although the development of such data-collection instruments requires special technical skills, the manager can help with the wording of questions, the cultural acceptability of certain questions, etc. This may be especially important in cases where the health systems researcher is not familiar with the cultural characteristics of the community in which he or she is doing research.

Because HSR is multidisciplinary in nature, the use of a multidisciplinary team is a must. This raises two main types of behavioural challenges:

1. The willingness and ability of researchers to work and perform effectively as members of a multidisciplinary team.

2. The ability of the health systems researcher to organize and manage a multidisciplinary team of professional researchers.

Basic and clinical researchers usually work alone or in health teams. To find researchers who are willing to work in multidisciplinary teams composed of health managers and researchers from various disciplines including health, social and behavioural sciences, economics, engineering, etc. is not an easy task, especially in developing countries. In many cases, the health systems researcher may be forced to compromise between the technical skills of a researcher and his or her willingness and ability to work as a member of a multidisciplinary team. On the other hand, the selection of the research team may be imposed without any previous consultation with the health systems researcher who serves as the principal investigator. This puts a great burden on the health systems researcher who must develop a team spirit and direct the efforts of the team to serve the overall goal and objectives of the research within the constraints of the team members' personal research interests, which may conflict with the overall research objectives.

The development of a research questionnaire is often the activity that brings out most clearly the difficulties of working with a multidisciplinary team. Both the types of questions and the size of the questionnaire generated by the team may be like the camel, which is a horse designed by a committee. For example, development of data-collection instruments for the Integrated Health Project in the Ministry of Health in Egypt in 1978 resulted in a questionnaire containing 2700 pieces of information out of which only 270 were used in the analysis.

The other type of behavioural challenge faced by a health systems researcher as a principal investigator is how to organize and manage a multidisciplinary research team.

Unfortunately, no universal magic formula is available and the health systems researcher will have to rely on his or her understanding of the personalities of the members of the team, the personal research interest of each, his or her working habits and attitudes toward other members of the team, his or her perception of good research, etc. The key word in managing a multidisciplinary team is "orchestration" rather than pure "coordination." Coordination is a mechanistic, externally imposed concept that involves a minimum of formal communication between the coordinator and the coordinated group. This is contrary to the concept of orchestration, which is based on both technical abilities and mutual interaction between the conductor of the orchestra and the group of musicians.

The reporting phase

This is an activity in which managers and researchers should work closely together. Hopefully they should agree on the contents and the mode of presentation of the final report. One of the main behavioural challenges that health systems researchers face during this process is how to accommodate the views of decision-makers without jeopardizing professional ethics and the scientific validity of the research information.

Decision-makers may question some of the information to be included in the report and disagree with some of the conclusions reached; or they may ask the researcher not to publish some of the factual findings for political, social, cultural, economic, or other reasons. This is an area that causes much debate and disagreement on the premise that researchers should be given full freedom to publish their scientific findings.

During this phase, the health systems researcher may face one or more of the following challenges:

- Questioning of the validity of some information used by the researcher in reaching his or her conclusions.
- Rejection of some conclusions reached by the researcher.
- Refusal to publish some of the findings on political, social, or cultural grounds.

Although research workers can usually deal effectively with the first and second issues because of their technical nature, their success in convincing the manager will not depend only on their technical skills. The communication skills of the researcher play a crucial role in convincing the manager and will be most effective if the researcher assumes an attitude of equal partnership with the manager.

The third issue is usually much more difficult for researchers to deal with because it goes beyond their technical abilities. One could hypothesize that early active involvement of managers as well as the political, social, and cultural sensitivity of the health systems researcher could greatly decrease refusal on these grounds. Although this is not always true, the outcome of the interaction between managers and researchers on this issue is highly dependent on the willingness of the researcher to compromise and convince the manager to adopt a selective refusal approach without distorting facts.

References

1. Hassouna, W.A. 1984. Introduction to health services research. In *Health services researcher*, Volume 4. Institute of National Planning, Cairo, Egypt.

2. Hassouna, W.A. 1988. Health systems research as part of the managerial process in support of the strategy for health for all. *Eastern Mediterranean Region Health Services Research Journal*, 4.

3. Sellitz, C. et. al. 1976. *Research methods in social relations*, 3rd ed. Holt, Rinehart and Winston, New York, NY.

Handout 9.2. Instructions for role-players

This exercise illustrates five different types of negotiations that may take place at three different stages of the research process. They illustrate five types of attitudes of health systems managers and provide examples of different approaches to negotiation that can be adopted by researchers facing these different attitudes.

Each scenario will be allowed only 10 minutes. The role-playing situations are as follows:

SITUATION 1: Problem definition initiated by the researcher

Description: The **researcher** is university-based. He (she) has identified an important problem in the health services and wants to carry out research to sustain or reject his (her) idea. He (she) contacts the responsible health service manager (top-level manager) to convince him (her) that such a problem exists and to get his (her) permission to enter the health services facilities and carry on the research.

The **manager** is faced, out of the blue, with this enthusiastic researcher who thinks that there is a problem in the services that he (she) has painfully managed to run so smoothly. He (she) is not at all convinced that the problem exists. He (she) thinks that the researcher does not know anything about the reality of the health services and refuses to accept the researcher's opinion and facts about it.

Result of the interaction: This should be spontaneously selected by both players according to their ability to sustain their positions.

Problem to be discussed: This must be chosen by the role-players. Both of them should be familiar with the selected topic. They might discuss the topic and the whole situation beforehand, but they should be spontaneous in their interaction during the play.

SITUATION 2: Problem definition initiated by the manager.

Description: The **manager** of the health services (middle-level manager) has identified a situation that is interfering with the quality of the health services being provided. He (she) decides that he (she) needs more information on this and contacts the university to request a researcher to do some research on the subject and provide him (her) with the information.

The research manager sends a **researcher** to talk with the manager to define the problem for the purpose of formulating a research proposal. In the first place, the researcher is not convinced that he (she) should do anything outside the university's research facilities. On hearing about the problem, he (she) doesn't think that it is a worthwhile subject on which to work. He (she) thinks that there are more important and relevant research endeavours than this, and is very reluctant to get involved in this research activity.

Result of the interaction: See instructions for SITUATION 1.

Problem to be discussed: See instructions for SITUATION 1.

SITUATION 3: Data collection.

Description: The **researcher** has completed all preliminary work and is at the data-collection stage. He (she) approaches an operational-level authority to obtain consent and assistance in collecting data in the health centre or district hospital. The researcher does not pay attention to the information needs of the manager, neither does he (she) care that the manager does not understand much about the research that is being carried out. Also, he (she) is not very concerned about the use of the research results in this particular health facility. His (her) only concern is to get authorization and help from the manager's staff to gather the data and depart.

The **manager** is an operational-level health officer, such as a director of a health centre or a rural hospital. He (she) has received an official letter from his (her) superiors asking him (her) to cooperate as much as possible with the researcher, as long as he (she) does not interfere with the provision of services of the health centre. He (she) cooperates with the researcher and wants to know more about the research objectives and whether the results will have some use for him (her) in the health centre. As he (she) has authority in the health centre, he (she) can refuse to permit the activities of the researcher if he (she) thinks that it is going to take too much staff time, thus interfering with the provision of the health services.

Results of the interaction: See SITUATION 1.

Problem to be discussed: See SITUATION 1.

SITUATION 4: Research reporting

Description: The research has been carried out and the results have been finalized. Some of them are very sensitive issues on political grounds; others have uncomplimentary implications for the health services.

The **researcher** discusses with the research manager the presentation of the results and the different levels of reporting.

The **manager** was involved in the project from the very beginning and it actually became a joint venture in which both the research institute and the health institution shared the costs of the research.

The researcher wishes to publish all the results, with different emphasis for different audiences, but believes that all results should be made public to enhance the impact on the health system.

The manager's position is to keep most of the results private and only publish those that show the good side of the health services. He (she) is very reluctant to present the touchy issues and he (she) did not expect to find that things were bad. He (she) is appalled with the research results and afraid of the political implications that could result if the results are published.

Result of the interaction: See SITUATION 1.

Problem to be discussed: See SITUATION 1.

SITUATION 5: Utilization of research results

Description: The **researcher** is university based. He (she) has carried out the research on his (her) own. He (she) has managed to gather the data in the health services through personal contacts and did not contact the top-management level during this process. It produced some very convincing findings about the inadequacy of the health services. He (she) is so happy about such clear-cut findings that he (she) decides to present the results to the top-level management of the health services to convince them to implement actions in the health services to correct the problems.

The **manager** is very annoyed that the research has been carried out without his (her) authorization and knowledge. He (she) refuses to acknowledge that the research problem exists and, furthermore, he (she) insists that if he (she) had known about the problem he (she) would have asked for the research himself.

The researcher is very surprised at this reaction and is taken aback. After a moment of hesitation he (she) tries to calm the manager and convince him (her) to use the results.

Results of interaction: See SITUATION 1.

Problem selection: See SITUATION 1.

Trainer's Notes

Module 9: NEGOTIATION SKILLS FOR HSR

Reading prior to presentation of the module:

All participants should be asked to read Handout 9.1, Behavioural challenges for health systems research, before the presentation of the module. Facilitators should be very familiar with these materials as well.

Preparation for role-playing

1. Overview

There are five scenarios, each illustrating one type of negotiation that is common in HSR.

2. Scheduling of the plays

This module should be given near the end of the workshop, to allow the facilitators time to observe the participants' behaviour and personalities and select appropriate actors for the plays.

3. Selection of role-players

The participants who will assume each role should be carefully chosen. Issues that should be taken into consideration include:

- Personality: Choose a role that fits the personality traits of the participant. This is very important, because it is very difficult for a person to play somebody else's personality at short notice unless, of course, he or she is a professional actor.
- Previous experience: Choose participants whose real-life situation is as close as possible to the role to be played. The participant may not have experienced the actual situation portrayed in the play, but may have been in close contact with it in his or her line of work and, therefore, would be able to reproduce the behaviour realistically.
- Physical appearance: As far as possible, avoid selecting a pair where one physically overshadows the other.

4. Briefing the role-players

- Allow some flexibility in the content of the role and ask the participants to select the subject matter that will be discussed in the play, so that they can select a subject with which they are familiar and, thus, be comfortable during the session.

- Instruct the actors in the types of behaviour to be displayed, emphasizing the fact that they should be spontaneous in their interaction and that they should react to the other person's attitudes in a natural way. The results of the interaction should be also natural (e.g., if convinced by a partner's argument, the actor may modify his or her attitudes and not cling to the original position).

- Brief the prospective role-players the day before the plays. Briefing material is provided in Handout 9.2. After the briefing, the role-players should be instructed to:

  - Read the background paper (Handout 9.1) and
  - Read the instructions for the relevant scenarios (Handout 9.2).

5. Physical environment

The environment for the plays should be arranged in such a way as to facilitate the behaviour to be displayed. For example, if the play is to take place in the manager's officer, the furniture provided should simulate that environment.

6. Video recording

If the session is to be used for further analysis or training, provisions should be made for video recording. The arrangements should be made beforehand to allow time to arrange for proper lighting and sound recording conditions.

Conducting the role-playing session

Five role-playing situations will be presented. In each, some salient features of the negotiation process that takes place in HSR will be highlighted.

During the plays, the other workshop participants should observe the interaction and identify aspects of the scenario that capture their attention in a significant way.

At the end of each scenario, the participants should be given 5 minutes to record their impressions, taking into consideration:

- The content of the interaction;
- The emotional involvement of the actors in the negotiation process;
- The expected outcome of the negotiation and its probable impact on the success of the research project as a tool to improve health care; and
- What each of the actors could have done differently and why.

Conducting the plenary discussion

After the five situations have been presented, the actors should be asked to describe their feelings while they were playing the parts and how they perceived the negotiation process.

The participants should compare their observation notes with the feelings described by the actors. Participants should be asked to share their perceptions of the interaction as a complement to that presented by the actors. Also discussion should be invited on the observations and conclusions, as outlined above.

The basic lessons learned from each scenario should be summarized by the facilitator. Some examples of the basic principles that could be derived from the discussion are:

- It is important to prepare yourself before entering a negotiating situation. Do a mental rehearsal. Prepare strategies and "fall-back positions."
- The success of the negotiation process should be judged according to the probability of the eventual use of research findings.
- If negotiation is initiated later in the research process, the process of negotiation will be more difficult.

Head Office
IDRC, PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

Regional Office for Southeast and East Asia
IDRC, Tanglin PO Box 101, Singapore 9124, Republic of Singapore

Regional Office for South Asia
IDRC, 11 Jor Bagh, New Delhi 110003, India

Regional Office for Eastern and Southern Africa
IDRC, PO Box 62084, Nairobi, Kenya

Regional Office for Middle East and North Africa
IDRC, PO Box 14 Orman, Giza, Cairo, Egypt

Regional Office for West and Central Africa
IDRC, BP 11007, CD Annexe, Dakar, Senegal

Regional Office for Latin America and the Caribbean
IDRC, Casilla de Correos 6379, Montevideo, Uruguay

Please direct requests for information about IDRC and its activities to the IDRC office in your region.

ABOUT THE AUTHOR

Indra Pathmanathan, MMBS, MPH, is a physician specializing in public health who is currently working in the Ministry of Health, Malaysia. She was previously on the academic staff of the University of Malaya. As head of the HSR program in Malaysia since its inception, she has been responsible for developing and implementing several strategies for HSR that have been replicated in other countries. These include training programs in HSR and Quality Assurance for decision-makers in ministries, for physicians, and others in district health teams, hospitals, and universities. She is a member of the Advisory Group on HSR, WHO-Geneva and serves on the editorial board of BRIDGE.